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CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT No. 1, NORTH ATLANTIC STATES.

WILFORD M. WILSON, District Editor.

GENERAL SUMMARY.

The weather conditions in the North Atlantic States for May, 1911, were especially noteworthy because of the intense general heat that prevailed after the first week. The high monthly temperature did not result from the usual sporadic hot days characteristic of spring weather, but from the humid, long-continued periods of heat usually associated with the months of midsummer. Indeed, the month, with its abnormally high day temperatures, its large number of clear days and high percentage of sunshine, its general deficiency in precipitation and severe local thundershowers, was much more like a typical June or September than like the traditional cool, showery May. Many stations reported the highest monthly mean temperature ever recorded in May, and the records for several of these stations are for over 40 years. The abnormal heat was due principally to the protracted duration of an area of high barometric pressure over the South Atlantic States accompanied by a storm area over the Northwest. The relative position of these pressure areas caused southerly winds and warm weather conditions over practically all the eastern part of the country. This pressure distribution continuing from the 9th to the 13th and from the 15th to the 21st, the temperature continued to rise and by the 22d a warm wave of unusual severity was general over the North Atlantic States.

A warm May is proverbially a dry May and the current month was no exception to the rule. In the southern part of the district the month was the driest May on record and in the northern and central sections it has been less dry only two or three times in the past 30 years. The drought conditions became evident during the second week, as no good general soaking rain had occurred since the middle of April. The immediate coast region and the southern parts of the district were most seriously affected. In the more northern sections the planting season was late and the drought condition was not as serious as in eastern New York, New Jersey, and southward, where considerable loss was sustained by agriculturists and truck farmers. In many of the cities and larger towns there was an actual water famine. The month closed with moderate to heavy showers general in all sections, except in Maine, and the droughty conditions were somewhat relieved.

As might be expected from the general prevalence of high barometric pressure there was abundant sunshine and the number of clear days for the month averaged 17. Thunderstorms were quite general during the third decade and damaging electrical storms occurred in southwestern New York and central Pennsylvania.

TEMPERATURE.

The average temperature for the district was 65.1°, or 4.8° above the normal. In New England and New York the monthly mean temperature exceeded any previous records for May, and in other sections of the district only one warmer May has been experienced, and that occured in 1896. The average temperature for May, 1911, was only 0.7° cooler than June, 1910, and 0.8° cooler than September, 1910. The excess was general over the entire district. The temperature of the New England section averaged 60.5°, or 5° above the normal; New York 63.9°, 5° above; Pennsylvania 65.5°, 6.1° above; New Jersey 64.5°, 4.3° above; Maryland and Delaware 68.1°, 4.9° above; West Virginia 65.2°, 4.1° above; and Virginia 67.7°, 3° above the normal. So general was the unusual heat that only one station in the district, Hyannis, Mass., reported a deficiency in temperature, and that only 0.2° below the normal. At individual stations the mean temperatures ranged from 71.6° at Annapolis, Md., and Lincoln, Va., to 51.0° at Eastport, Me.

The highest daily temperature in the district was 102° at Lincoln, Loudon County, Va., on May 22. Temperatures of 100° or over occurred on the 22d at four stations in Maine, two in New Hampshire, one in Maryland, and one in Virginia. In many stations in the St. Lawrence Valley and northern New England not only were all records for May exceeded, but in some instances, even the highest known temperatures in the midsummer months were surpassed. Daily temperatures of over 90° were of frequent occurrence throughout the district. In extensive areas in New York, Pennsylvania, New Jersey, Delaware, West Virginia, and Virginia the daily temperature was from 6 to 18° above the normal on from 10 to 18 successive days. The change in temperature conditions occurred with marked uniformity from Maine to Virginia. The month opened with about the normal temperature but on the early morning of the 2d there was a sharp drop in temperature and damaging frosts occurred in all sections. This cold period lasted until the 6th or 7th and the lowest temperatures of the month at all stations occurred during the first week. Temperatures as low as 16 and 17° occurred in northern New England and central New York. Freezing temperatures occurred on one or more nights of the first week in May from Maine to the tidewater counties of Virginia, except that a very limited area along the coast from southeastern New York southward escaped the general killing frost. Considerable damage resulted in West Virginia and parts of the Susquehanna Basin, but elsewhere extensive planting had been retarded by the cold, wet condition of the soil in April, and vegetation had not advanced sufficiently for general damage from the freeze.

Normal temperatures prevailed from the 7th to the 9th, but on the 10th the conditions set in that produced the marked excess in temperature for the month. From the 10th to the 15th the temperature was from 6° to 10° in excess of the normal. Vegetation advanced rapidly, although evidences of drought had appeared in New England. From the 16th to the 30th intense heat prevailed over the entire inland part of the district and this heated

period has seldom, if ever, been equalled in duration within the past 40 years. At times during this period schools and factories were closed, and special warnings regarding the intense heat were issued. Many deaths resulted from heat prostrations. Along the coast from Massachusetts to Delaware the heat wave was far less severe than in the interior and the modifying influence of the ocean was noticeable as much as 50 miles inland. In parts of Long Island the temperature was from 24° to 30° lower than in the central part of New York on the same day. The highest temperature at New York City was only 84° on the 22d, the same day that other stations recorded over 100°. In New Jersey similar conditions prevailed, the coolest weather occurring on the coast rather than in the northern interior as usual.

An area of low pressure with unsettled weather and general thunder showers brought much relief on the 30th and 31st.

PRECIPITATION.

The precipitation for the district averaged 1.52 inches, or 2.19 inches below the normal. Only three stations recorded amounts above normal, while 204 reported a deficiency in precipitation. With two or three exceptions, the years differing in the several sections, May, 1911, was the driest May on record. In New England the average rainfall was 1.15 inches, or 2.40 inches below the normal. The precipitation was from showers and very unevenly distributed. Maine was the driest State, the amounts in the eastern and northern counties averaging less than 0.50 inch for the month. Some localities in these regions reported a monthly amount too small to be measured. In New York the average fall was 2.07 inches, or 1.65 inches below the normal, the amounts decreasing toward the lower Hudson Valley and Long Island Sound. In New York City and contiguous regions great inconvenience resulted from the need of a sufficient water supply. In Pennsylvania the rainfall was little more than half the usual amount for May, and averaged 2.14 inches with a departure from the normal of 1.69 inches. Maryland and Delaware reported a monthly average of only 1 inch, which is 2.69 inches less than the normal, and in New Jersey the average rainfall, 1.37 inches, is less than for any May, except in 1903 and 1887, since the beginning of the records. In West Virginia 1.94 inches is the section average and the deficiency is 1.41 inches. For that part of Virginia included within the district the average precipitation was only 0.94 inch, or 3.01 inches less than the normal. The greatest amount at any station was 6.81 at Hamburg, Pa., and the least amount was a trace at Bar Harbor, Me., and Chestertown, Md. The greatest amount of precipitation in any 24-hour period was 2.96 inches at Hamburg, Pa., on the 31st.

During the first decade the precipitation for the district was generally light and consisted mainly of showers on the 1st and 2d and snow flurries on the 3d, 4th, and 5th, in Maine, New Hampshire, Vermont, New York, and the northern counties of Pennsylvania. From the 10th to the 22d precipitation was light, except in western Massachusetts and parts of Rhode Island, Connecticut, and northern New York, where moderately heavy showers occurred. Large areas in the district were without rain for the greater part of the month, and the intense heat and dryness of the soil were exceedingly detrimental to the growth of vegetation. Thunderstorms were somewhat prevalent from the 22d to the 26th, but they were scattered, and, as a rule, did not furnish even temporary relief from the drought. The continued deficiency in the rainfall materially reduced the water supply for the large cities and for manufacturing and other purposes. The month closed with moderate to heavy showers in all parts of the district except the extreme north.

SUNSHINE.

The amounts of clear weather and sunshine were far above the normal, and were not equaled last year in any month before July. The average number of hours of sunshine for 11 stations was 309, and the percentage of possible sunshine averaged 66. As compared with the rest of the district, the weather in and near Connecticut was remarkably cloudy, the effect of which may be seen in the temperatures recorded in that region. At Hartford, Conn., the percentage of possible sunshine was only 52, while it was 73 at Boston, 72 at New York, and showed a general increase southward, rising to 86 at Mount Weather, Va., where the sun shone 382 hours within the month.

The number of days with 0.01 inch or more of precipitation averaged 6, the number of clear days 17, partly cloudy days 10, and cloudy days 4.

RIVER CONDITIONS.

At the beginning of the month the rivers in most parts of the district contained good volumes of water, and the heavy rains of the 1st caused a noticeable rise that culminated about the 3d. Owing to the scarcity of rainfall during the remainder of the month, there followed a general decline in the river stages that continued with little interruption until about the 30th or 31st. At several stations lower stages were recorded than in any other May since the beginning of river observations from five to eight years ago.

TABLE 1.—*Climatological data for May, 1911. District No. 1, North Atlantic States.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maine.																				
Bar Harbor	Hancock	20	25	55.6	+ 3.6	85	22	30	4	42	T.	− 3.46	T.	T.	0	19	4	8	sw.	Wm. Miller.
Cornish	York	778	56	62.0	+ 7.4	100	22	24	5	48	1.00	− 2.67	0.30	T.	8	14	9	8	w.	T. H. West.
Eastport	Washington	53	39	51.0	+ 4.1	76	13	28	4	35	0.13	− 3.67	0.06	T.	5	9	11	11	s.	U. S. Weather Bureau.
Fairfield	Somerset	90	26	60.2	+ 6.1	96	22	28	5	44	1.34	− 1.84	0.45	0	5	16	7	8	.....	E. F. Parker.
Farmington	Franklin	450	14	60.3	+ 6.2	100	22	20	5	53	1.20	− 2.46	0.60	T.	4	14	13	4	sw.	W. G. Mallett.
Gardiner	Kennebec	163	19	59.5	+ 4.2	99	22	25	5	46	1.10	− 2.60	0.58	0	5	18	4	9	se.	Samuel D. Soule.
Greenville	Piscataquis	1,000	7	57.2	.....	90	21†	26	4	40	0.40	.....	0.10	T.	7	.....	.....	.....	.....	U. S. Weather Bureau.
Houlton	Aroostook	362	9	61.0	.....	94	21	22	6	54	0.03	.....	0.03	0	1	28	1	2	w.	Bangor & Aroostook R. R.
Lewiston	Androscoggin	185	37	60.6	+ 6.0	101	22	31	5	42	0.56	− 3.06	0.28	T.	3	14	8	9	s.	Union Water Power Co.
Madison	Somerset	257	8	59.2	.....	97	23	23	5	40	0.59	.....	0.24	0	3	19	6	6	s.	William Jardine.
Millinocket	Penobscot	386	8	59.5	.....	96	22	22	5	52	0.51	.....	0.24	T.	3	12	7	12	sw.	H. S. Ferguson.
North Bridgton	Cumberland	450	18	61.6	+ 6.7	100	22	26	5	50	1.35	− 2.17	0.90	T.	6	18	7	6	s.	G. E. Chadbourne.
Orono	Penobscot	129	42	59.2	+ 6.5	96	22	26	4†	47	0.75	− 2.86	0.33	T.	5	11	6	14	sw.	Agricultural Exp. Station.
Patten	do	550	9	58.0[e]	.....	96	29	18	5	57[e]	2.58	.....	2.00	T.	4	13[f]	8[f]	4[f]	sw.	Bangor & Aroostook R. R.
Portland	Cumberland	99	40	56.8	+ 3.3	91	22	27	4	38	1.37	− 2.30	0.55	T.	9	14	6	11	s.	U. S. Weather Bureau.
Presque Isle	Aroostook	.....	2	58.0[b]	.....	94	21	22	5	45[b]	0.34	.....	0.30	0	2	22[b]	2[b]	5[b]	s.	San Lorenzo Merriman.
Rumford Falls	Oxford	505	18	60.3	+ 6.6	97	22	27	5	40	0.88	− 2.74	0.29	T.	4	18	11	2	nw.	Chas. A. Mixer.
Winslow	Kennebec	90	16	61.2	.....	98	22	29	5	45	0.61	.....	0.45	0	3	16	6	9	w.	Hollingsworth & Whitney Co.
New Hampshire.																				
Alstead Center	Cheshire	1,120	7	61.2	+ 3.3	91	22	24	4	35	1.70	− 0.96	0.63	0	8	19	8	4	sw.	Frank Dewing.
Benton	Grafton	.....	2	59.6	.....	92	11	16	3	42	2.28	.....	1.05	T.	4	21	3	7	s.	N. H. State Sanatorium.
Bethlehem	do	1,470	19	59.2	+ 5.2	91	22	24	4	40	1.10	− 1.96	0 31	T.	7	23	3	5	nw.	Benj. Tucker.
Concord	Merrimack	350	51	61.6	+ 5.9	98	22	26	5	46	1.57	− 1.67	0.40	T.	8	13	11	7	se.	U. S. Weather Bureau.
Durham	Stafford	88	16	60.6	+ 5.8	94	22	25	4	47	1.10	− 1.57	0.56	0	6	18	3	10	se.	Agricultural Exp. Station.
Franklin	Merrimack	440	12	63.1	.....	100	22	23	5	47	0.78	.....	0.29	T.	6	16	9	6	sw.	Dr. C. P. Webster.
Grafton	Grafton	863	25	59.8	+ 6.5	95	22	20	5	51	1.39	− 1.83	0 47	1.0	8	20	6	5	w.	P. R. Kimball.
Hanover	do	603	77	61.0	+ 5.6	95	22	24	4	48	1.29	− 1.44	0.63	0.2	9	9	10	12	nw.	Dartmouth College.
Keene	Cheshire	506	26	61.6	+ 5.3	98	22	22	4†	50	0.88	− 2.50	0.38	T.	7	16	11	4	nw.	Samuel Wadsworth.
Nashua	Hillsboro	125	26	63.4	+ 6.2	100	22	27	5	46	1.47	− 1.94	0.66	0	8	.....	.....	.....	.....	Jackson Co.
Newton	Rockingham	.....	23	59.7	+ 4.5	93	22	24	4	41	0.68	− 2.95	0.18	0	6	11	16	4	sw.	W. C. Gale.
Plymouth	Grafton	500	23	60.7	+ 7.1	95	22	22	5	49	0.76	− 2.60	0.22	T.	5	18	3	10	w.	Mrs. Hattie G. Trow.
Vermont.																				
Bloomfield	Essex	.....	4	58.6	.....	96	22	20	5	48	1.08	.....	0.34	T.	7	19	8	4	s.	Lyman Falls L. & P. Co.
Cavendish	Windsor	910	8	60.9	.....	99	22	23	4†	46	0.47	.....	0.26	0	3	23	5	3	w.	Miss M. A. Kingsbury.
Chelsea	Orange	840	16	58.8	+ 6.2	93	22	20	5	49	0.44	− 2.20	0.18	1.0	8	14	9	8	w.	W. F. Dewey.
Jacksonville	Windham	1,000	26	62.0	+ 8.7	91	22	22	4†	47	2.06	− 1.99	0.75	0	7	21	7	3	ne.	Miss Martha French.
Manchester	Bennington	980	12	62.0	.....	92	22	24	4	34	0.29	.....	0.19	0	3	17	10	4	sw.	N. M. Canfield.
Saint Johnsbury	Caledonia	711	18	61.6	+ 6.5	96	22	22	5	48	1.08	− 1.66	0.35	T.	8	18	8	5	nw.	Fairbanks Museum.
Woodstock	Windsor	700	19	60.4	+ 5.5	95	20	22	6	51	2.39	− 0.82	0.66	0	7	13	6	12	.....	John S. Eaton.
Massachusetts.																				
Amherst	Hampshire	222	22	62.4	+ 5.4	94	22	27	4	42	1.37	− 2.46	0.58	0	8	19	8	4	s.	Agri. Exp. Station.
Blue Hill	Norfolk	640	27	60.6	+ 5.1	93	22	27	4	33	0.89	− 2.88	0.39	0	8	17	6	8	s.	A. L. Rotch.
Boston	Suffolk	124	41	62.4	+ 5.8	92	22	33	4	31	0.35	− 3.16	0.17	0	5	11	8	12	sw.	U. S. Weather Bureau.
Chestnut Hill	do	124	31	64.0	+ 6.1	96	22	29	4	37	0.58	− 2.98	0.18	0	6	23	3	5	.....	Met. Water Board.
Clinton	Worcester	370	15	62.2	.....	92	22	30	3	35	1.41	.....	0.43	0	5	21	3	7	.....	Do.
Concord	Middlesex	139	21	61.4	+ 5.2	96	22	25	5	44	0.29	− 2.83	0.25	0	3	12	11	8	s.	Fred A. Tower.
Fall River	Bristol	200	45	60.0	+ 3.2	83	22	33	3†	28	1.95	− 2.28	0.90	0	9	10	17	4	sw.	C. V. S. Remington.
Fitchburg	Worcester	550	28	63.8	+ 6.5	97	22	28	4	38	1.80	− 1.66	1.40	0	7	18	5	8	e.	Dr. A. P. Mason.
Framingham	Middlesex	160	31	63.4	+ 5.3	96	22	29	4	42	0.72	− 2.67	0.32	0	7	.....	.....	.....	.....	Met. Water Board.
Hyannis	Barnstable	31	20	56.6	+ 0.2	77	22	33	4	27	0.76	− 2.86	0.29	0	10	17	6	8	sw.	C. F. Sleeper.
Lawrence	Essex	51	27	62.6	+ 4.5	98	22	29	4†	44	0.30	− 3.41	0.25	0	2	13	14	4	ne.	Essex Co.
Lowell	Middlesex	100	26	64.6	+ 7.1	98	22	29	4	41	0.81	− 2.89	0.61	0	5	.....	.....	.....	.....	Props. Locks & Canals.
Middleboro	Plymouth	53	25	59.6	+ 4.3	91	22	26	5	42	0.97	− 3.03	0.34	0	5	4	17	10	sw.	A. R. Gurney.
Monson	Hampden	420	27	61.4	+ 4.0	93	22	30	7	48	0.59	− 2.81	0.25	0	5	17	11	3	sw.	Dr. G. E. Fuller.
Nantucket	Nantucket	15	25	54.4	+ 1.4	74	13	36	4	27	0.82	− 1.85	0.42	0	8	14	10	7	sw.	U. S. Weather Bureau.
New Bedford	Bristol	88	99	59.8	+ 5.1	83	22	34	4	32	1.45	− 2.50	0.72	0	6	20	2	9	sw.	City Engineer.
Norfolk	Norfolk	244	8	60.6	.....	97	22	22	4	51	1.63	.....	0.86	0	6	20	7	4	w.	Ruby H. Martyn.
Northampton	Hampshire	205	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. E. Hoxie.
Plymouth	Plymouth	.....	26	58.6	.....	92	23	27	4	40	0.61	.....	0.19	0	5	23	0	8	.....	Laura B. Knapp.
Provincetown	Barnstable	40	24	56.5	+ 2.2	83	22	34	4	30	0.27	− 3.03	0.17	0	2	19	0	12	sw.	Gideon Bowley.
Rockport	Essex	25	9	56.3	.....	87	22	30	4	30	0.90	.....	0.70	0	4	13	9	9	sw.	C. F. P. Bearse.
Rutland	Worcester	1,160	9	60.8	.....	92	22	24	3	40	1.87	.....	0.95	0	4	17	8	6	sw.	State Sanatorium.
South Egremont	Berkshire	764	9	59.6	.....	91	22	22	5	44	1.43	.....	0.40	0	8	.....	.....	.....	s.	Roscoe C. Taft.
Turners Falls	Franklin	200	20	62.6	+ 5.0	90	22	30	4	40	1.62	− 1.24	0.87	0	6	.....	.....	.....	.....	Turners Falls Co.
Westboro	Worcester	298	37	65.4	+ 6.8	98	22	27	4	41	1.35	− 1.91	0.66	0	5	.....	.....	.....	.....	G. S. Newcomb.
Williamstown	Berkshire	711	30	62.8	+ 6.3	92	22	28	5	44	1.62	− 1.42	0.73	0	8	14	9	8	se.	Williams College.
Worcester	Worcester	518	19	64.4	+ 6.7	90	22	33	4	27	3.66	− 0.39	1.42	T.	10	15	6	10	ne.	Geo. W. Swan.
Rhode Island.																				
Block Island	Newport	26	31	55.3	+ 2.4	72	13	38	4	23	1.08	− 2.67	0.60	0	9	12	7	12	sw.	U. S. Weather Bureau.
Bristol	Bristol	53	25	57.9	+ 2.3	74	10†	36	4	26	1.24	− 2.58	0.37	0	7	17	5	9	s.	N. G. Herreshoff.
Kingston	Washington	250	22	58.2	+ 3.2	87	22	26	4	39	1.97	− 2.60	1.05	0	10	13	10	8	sw.	Nathaniel Helme.
Narragansett Pier	Newport	22	29	56.1	+ 1.1	79	10	28	4	34	1.68	− 2.57	0.74	0	7	18	2	11	sw.	U. S. Weather Bureau.
Providence	Providence	182	7	60.8	+ 2.3	85	22	33	4	31	2.04	− 1.47	0.88	0	7	.....	.....	.....	se.	Do.
Connecticut.																				
Bridgeport	Fairfield	20	18	62.1	.....	88	22	29	4	39	1.12	.....	0.43	0	8	13	13	5	sw.	William Jennings.
Canton	Hartford	900	50	62.0	+ 6.4	91	22	27	5	40	2.60	− 1.86	0.72	0	8	13	9	9	nw.	G. J. Case.
Colchester	New London	370	25	60.6	+ 3.0	90	22	23	5	43	0.84	− 3.73	0.39	0	6	17	5	9	sw.	S. P. Willard.
Cream Hill	Litchfield	1,300	45	61.8	+ 6.0	92	22	26	3	31	3.03	− 1.14	0.92	0	9	17	8	6	w.	C. L. Gold.
Danielson	Windham	300	9	61.0	.....	94	22	25	4	42	1.51	.....	1.25	0	3	18	10	3	s.	F. E. Bitgood.
Hartford	Hartford	159	7	63.2	+ 5.7	93	22	32	4	32	1.22	− 2.32	0.50	0	10	9	13	9	s.	U. S. Weather Bureau.
Hawleyville	Fairfield	600	13	62.9	+ 5.1	90	22	29	5	34	3.17	− 1.16	0.50	0	9	14	6	11	sw.	C. B. Hawley.
New Haven	New Haven	107	124	61.4	+ 3.8	85	22	33	4	33	0.74	− 2.90	0.30	0	12	16	9	6	s.	U. S. Weather Bureau.
New London	New London	47	41	62.2	+ 6.0	86	22	33	4	37	0.74	− 3.00	0.22	0	7	13	11	7	sw.	T. C. Dillon.
North Grosvenordale	Windham	400	21	61.8	+ 5.1	97	22	26	4	43	0.35	− 3.58	0.10	0	7	15	10	6	sw.	Grosvenor Dale Co.
Norwalk	Fairfield	116	21	62.0	+ 4.9	88	22	27	4	43	1.60	− 3.22	0.52	0	9	20	9	2	sw.	Geo. C. Comstock.
Southington	Hartford	140	42	61.8	+ 3.8	91	22	24	4	42	0.20	− 3.17	0.10	0	2	20	11	0	s.	Luman Andrews.

TABLE 1.—*Climatological data for May, 1911. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Connecticut—Contd.																			
Storrs	Tolland	640	23	62.2	+ 6.6	92	22	32	6	41	0.33	− 3.55	0.27	0	2	23[a]	0[a]	7[a]	s.	Agri. Exp. Station.
Torrington	Litchfield	625	10																	Prof. E. H. Forbes.
Voluntown	New London	260	26																	F. S. Bitgood.
Waterbury	New Haven	400	36	63.2	+ 5.1	94	22	28	4†	44	0.87	− 3.36	0.29	0	8	14	12	5		N. J. Welton.
New York.																				
Addison	Steuben	1,000	21	64.9	+ 7.2	98	22	24	4	49	2.56	− 1.48	0.83	T.	10	22	7	2	sw.	Dr. H. R. Ainsworth.
Albany	Albany	97	90	65.5	+ 6.6	97	22	31	4	36	2.15	− 0.83	0.75	T.	10	15	13	3	s.	U. S. Weather Bureau.
Alfred	Allegany	1,976	16	61.8[b]	+ 6.9	92	22†	22	3	42[b]	3.53	− 0.80	1.74	0.5	9					Prof. F. S. Place.
Amsterdam	Montgomery	277	7	63.6	.....	97	22	26	4	39	1.50	.....	0.80	T.	5	22	7	2	w.	Emery Elwood.
Athens	Greene	90	9	65.0	.....	94	22	31	3†	42	2.37	.....	1.16	T.	9	16	10	5	sw.	E. C. Brooks.
Ballston Lake	Saratoga	400	7	62.7	.....	94	22	25	4	42	1.61	.....	0.95	T.	5	19	6	6	w.	George R. Schauber.
Bedford	Westchester	450	20	64.4	+ 5.7	93	22	29	4	38	1.25	− 3.31	0.63	0	11	16	12	3		Dr. L. Rosenberg.
Binghamton	Broome	875	20	63.6	+ 6.6	94	22	27	4	42	1.94	− 1.15	0.69	T.	10	11	8	12	e.	U. S. Weather Bureau.
Bouckville	Madison	1,350	14	61.2	+ 6.9	92	22	21	4	38	3.30	− 0.02	1.33	T.	10	15	8	8	nw.	L. W. Griswold.
Boyds Corners	Putnam	560	29								2.61	− 2.07								Thomas Manning.
Carmel	do	500	19	62.8	+ 3.5	91	23	28	4	45	2.75	− 1.62	1.02	0	11	20	2	9	ne.	Do.
Chatham	Columbia	470	10	64.4	+ 6.8	96	22	27	5	42	1.00	− 2.14	0.30	T.	8	22	4	5	n.	Morton R. Tank.
Cooperstown	Otsego	1,250	57								2.77	− 0.87	0.70	0	8	22	6	3	w.	Miss Elizabeth Keese.
Corinth	Saratoga	542	9								3.08	.....	1.10		6					A. M. Hollister.
Cortland	Cortland	1,129	49			94	23†	26	4	43	2.20	− 1.80	1.43	T.	5	22	6	3	nw.	F. G. Baker.
Cutchogue	Suffolk	32	34	60.0	+ 2.7	80	13†	31	4	32	0.92	− 1.49	0.38	0	7	14	16	1	sw.	Wm. A. Fleet.
De Ruyter	Madison	1,300	8	60.6	.....	92	22	23	4	44	3.05	.....	1.04	T.	9	19	7	5	nw.	B. D. Crandall.
Easton	Washington		21								1.63	− 2.18	1.11	0	2					H. Taber.
Glens Falls	Warren	340	20	66.0	+ 7.8	98	22	27	4	44[a]	1.46	− 1.61	0.79	0	6	15	6	10	s.	Prof. C. L. Williams.
Gloversville	Fulton	850	19	62.4	+ 6.6	96	22	24	4	39	1.25	− 2.75	0.38	0	7	18	12	1	w.	W. L. McLean.
Greenfield Center	Saratoga	314	13	62.9	+ 5.8	96	22	25	4	41	2.43	− 0.55	0.75	0	7	20	8	3	w.	S. E. Darrow.
Greenwich	Washington	425	14	66.4	+10.1	97	22	27	4	43	2.86	− 0.46	0.98	0	10	15	16	0	w.	Homer J. Whitcomb.
Griffin Corners	Delaware	2,260	11	61.7	+ 8.5	94	22	19	5	48	0.87	− 2.10	0.31	T.	5	17	11	3	w.	Harold O. Judd.
Haskinville	Steuben		16								2.87	− 0.33	0.90	0.5	10					W. G. Collins.
Homer	Cortland		20	61.8	+ 7.8	92	21	23	4	42	2.69	.....	0.73	T.	7	20	6	5	nw.	Charles C. Mortimer.
Hoosick Falls	Rensselaer	410	9								2.44	.....	1.23	T.	8				w.	Sanford L. Cluett.
Indian Lake	Hamilton	1,705	12	59.2	+ 6.8	95	22†	20	5	53	2.57	− 0.65	0.75	0	6	13	12	6	w.	Lester Severie.
Jeffersonville	Sullivan	1,240	8	62.1	.....	96	22	20	4	47	1.12	.....	0.23	T.	7	17	11	3	w.	Charles Wilfert, jr.
Liberty	do	2,300	29	59.9	+ 5.5	89	21†	21	4	34	1.76	− 2.26	0.52	0	8	20	1	10	nw.	Dr. H. M. King.
Little Falls	Herkimer	924	13	63.0	+ 7.0	95	22	27	3	39	1.70	− 1.71	0.70	T.	6	24	3	4	w.	O. J. Dempster.
Mohonk Lake	Ulster	1,245	15	63.4	+ 5.9	89	22	27	3	30	2.77	− 1.00	0.80	0	8	22	5	4	sw.	Albert K. Smiley.
Morehouseville	Hamilton	1,697	3	57.6	.....	89	22	18	4	44	3.47	.....	0.85	0	10	21	5	5	w.	Theo C. Remonda.
Mount Hope	Westchester	200	14	64.1	+ 4.9	87	22	34	3	36	3.54	− 0.96	0.90	0	12	9	18	4		W. A. Cornelius.
Newark Valley	Tioga	825	24								2.59	+ 0.02	0.77	0.5	7					M. D. Clinton.
New Berlin	Chenango		4								2.17	.....	1.10	T.	11	21	2	8	s.	Roger Greene.
Newcomb	Essex	1,600	0	58.4	.....	92	21	20	5	49										Edward Spain.
New Lisbon	Otsego	1,234	21	58.4	+ 5.2	93	22	17	5	49	1.70	− 2.22	0.61	1.0	7	18	5	8	s.	G. A. Yates.
New York City	New York	314	86	59.3	+ 4.3	84	22	36	3	27	0.91	− 2.27	0.56	0	10	11	12	8	sw.	U. S. Weather Bureau.
North Creek	Warren	1,002	3	62.0	.....	94	29	23	5	42	1.80	.....	0.65	0	4	20	5	6	w.	W. G. Kenwell.
Northville	Fulton	742	9								3.00	.....	0.97		6					P. C. Pickard.
Norwich	Chenango	1,015	5	62.2[a]	.....	94	22†	26	5†	46[d]	2.36	.....	1.84	1.0	6	22	7	2		P. L. Clark.
Oneonta	Otsego	1,112	17	63.8	+ 5.7	97	22	26	5	44	2.15	− 1.11	1.12	T.	8	23	4	4	nw.	H. W. Lee.
Oxford	Chenango	916	46	61.9	+ 6.3	92	22	24	5	46	3.49	− 0.46	1.85	0	7	11	17	3	w.	John P. Davis.
Oyster Bay	Nassau	40	7	63.9	.....	86	22	36	3	31	1.07	.....	0.34	0	8	22	1	8	sw.	Prof. Thomas Colby.
Port Jervis	Orange	470	27	65.3	+ 5.8	97	22	27	4	43	1.11	− 3.20	0.63	0	8	19	9	3	sw.	F. E. Carruth.
Rome	Oneida	445	15	62.4	.....	95	23	24	4	38	2.94	.....	1.10		5					John Omara.
Salisbury	Herkimer	1,526	14	59.6	+ 5.3	92	21	20	2†	47	2.18	− 2.24	1.20	T.	5	16	14	1	w.	Joseph Ryan.
Scarsdale	Westchester	200	7	63.7	.....	85	22	32	3†	37	1.47	.....	0.67	T.	5	18	10	3	sw.	C. H. Wilmarth.
Setauket	Suffolk	40	26	60.4	+ 2.3	83	22	35	5	33	0.90	− 2.74	0.21	0	10	16	7	8	e.	Selah B. Strong.
Sherburne	Chenango		4								2.98	.....	1.76	T.	4	21	1	9	s.	E. B. Collins.
Southampton	Suffolk	36	10	58.6	+ 2.9	78	10†	29	3	33	1.23	− 2.22	0.81	0	8	11	16	4	sw.	W. L. Jagger.
Southeast Reservoir	Putnam	310	16								2.48	− 2.11								Thomas Manning.
Spier Falls	Saratoga	400	10	65.4	.....	95	21	24	4	43	1.92	.....	0.94	0	4	9	19	3	w.	George E. Fifield.
Trenton Falls	Oneida	751	8								2.69	.....	0.78	0.4	6					C. W. Young.
Tribeshill	Montgomery	268	8								1.50	.....	0.60		4					R. S. Marshall.
Utica	Oneida	537	45								0.92	− 2.74	0.27		6					W. E. Young.
Wading River	Suffolk	112	5	61.0	.....	88	22	26	5	44	1.22	.....	0.50	0	14	23	6	2	sw.	H. B. Fullerton.
Wappingers Falls	Dutchess	110	21	64.4	+ 3.6	89	22	31	4	39	1.52	− 3.31	0.42	0	7	18	12	1	s.	H. C. Townsend.
Warwick	Orange	538	17								0.62	− 3.41	0.22	0	10					John W. Sly.
Waverly	Tioga	824	29	64.8	+ 6.8	97	22	23	4†	50	2.35	− 1.01	0.65	0.2	12	10	16	5	sw.	J. F. Shoemaker.
Wells	Hamilton	1,000	5	63.2	.....	99	29	21	5	50	3.93	.....	1.05		8					V. E. Dewey.
West Berne	Albany	946	12	62.4	+ 6.0	97	22	20	5	49	0.56	− 2.43	0.38	0	4	14	12	5	se.	W. J. Haverly.
West Point	Orange	167	62	65.6	+ 5.7	91	23	35	3†	32	0.57	− 3.95	0.11	0	9	16	5	10	w.	U. S. Military Academy.
Windham	Greene	1,520	11	60.4	+ 7.1	90	22	23	5	40	1.81	− 1.49	0.42	T.	9	15	15	1	nw.	A. R. Mott.
Pennsylvania.																				
Altoona	Blair	1,181	23	68.4	+ 9.2	93	23†	35	3	37	2.46	− 1.72	2.11	0	3					C. W. Billin.
Bethlehem	Northampton	260	1	70.0	.....	94	23	35	5	38	1.55	.....	0.70	0	5	16	4	11	se.	Prof. E. C. Roest.
Clearfield	Clearfield	1,107	3	63.9	.....	97	22	22	5	44	1.34	.....	0.61	0	6	21	8	2	w.	Raymond C. Ogden.
Drifton	Luzerne	1,633	13	62.3	+ 6.3	90	29†	26	3	38	3.55	− 1.18	2.25	T.	7	19	9	3	w.	Eckley B. Coxe, jr.
Emporium	Cameron	1,050	24	62.8	+ 3.6	91	28†	23	5	44	1.95	− 2.70	0.45	T.	9	18	10	3	w.	T. B. Lloyd.
Ephrata	Lancaster	384	11	65.9	+ 5.2	95	19	31	3	40	1.01	− 2.14	0.76	0	4	24	3	4	se.	W. L. Frantz.
Everett	Bedford	1,080	13	65.2	+ 5.4	94	19	26	5	42	0.65	− 2.95	0.25	T.	8	11	18	2	nw.	B. L. Steckman.
George School	Bucks	184	4	65.2[b]	.....	96	19	30	4	45[b]	1.17	.....	0.80	0	5	21	9	1		N. W. Swayne.
Gettysburg	Adams	600	37	68.2	+ 7.2	99	19	32	5	41	3.50	− 0.70	1.93	0	7	14	16	1	sw.	Col. E. B. Cope.
Gordon	Schuylkill	804	7	63.8	.....	92	22†	23	5	45	2.90	.....	1.03	0	7	21	8	2	sw.	Capt. J. G. Johnson.
Hamburg	Berks	380	15	66.8	+ 4.9	94	23	32	5†	45	6.81	+ 1.99	2.96	0	6	24	6	1	nw.	W. J. Kalbach.
Harrisburg	Dauphin	361	23	68.4	+ 6.7	94	19	38	3	32	2.26	− 1.41	1.14	0	9	11	13	7	w.	U. S. Weather Bureau.
Huntingdon	Huntingdon	650	23	65.9	+ 5.5	95	21†	25	5	45	2.18	− 2.73	1.10	0	9	11	14	6	w.	Prof. W. J. Swigart.
Hyndman	Bedford	977	4	64.8	.....	95	22†	25	5	45	0.93	.....	0.32	T.	5	13	16	2	n.	H. C. Mauk.
Lawrenceville	Tioga	1,006	13	64.4	+ 7.2	97	22	23	5†	53	2.70	− 0.65	0.60	0	9	16	10	5		C. P. Darling.
Lebanon	Lebanon	458	24	65.5[b]	+ 4.7	91	23	30	5	37[b]	1.63	− 3.18	0.87	0	7	18[a]	10[a]	2[a]	w.	Sowers & Rothermal.
Le Roy	Bradford	1,400	22	64.2	+ 7.0	93	22	26	4†	38	2.06	− 1.87	0.68	T.	13	14	12	5	sw.	G. W. T. Warburton.
Lock Haven	Clinton	560	23	68.1	+ 6.2	98	29†	29	5	42	1.52	− 2.17	0.69	T.	10	9	18	4	w.	Prof. J. A. Robb.
Marion	Franklin	640	7	67.6	.....	98	22	28	5	50	1.08	.....	0.74	0	3	19	12	0		Hon. C. B. Hege.
Mauch Chunk	Carbon	634	22	65.5	+ 5.2	94	23	30	5†	43	1.85	− 2.56	0.62	0	10	21	6	4	w.	F. C. Wintermute.
Mifflintown	Juniata	445	7	65.2	.....	94	22	26	5	46	1.83	.....	0.82	0	9	16	5	10	se.	Wellington Smith.
Milford	Pike	455	8	62.4	.....	96	22	22	4	47	1.51	.....	0.48	T.	12	14	14	3	nw.	Mrs. Alla Doughty.

TABLE 1.—*Climatological data for May, 1911. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Pennsylvania—Contd.																				
Montrose	Susquehanna	1,658	7	61.9	.....	91	22	22	4	38	2.60	.....	0.85	0.1	9	19	9	3	se.	Silas Jagger.
Muncy Valley	Sullivan	519	1	64.8	.....	93	29†	27	3	37	2.45	.....	0.82	T.	5	28	0	3	.....	F. W. Buck.
New Germantown	Perry	873	7	65.4[b]	.....	92	19	28[b]	4	40[b]	1.60	.....	0.70	0	3	25[b]	1[b]	3[b]	w.	Ed. C. Johnston.
Philadelphia (1)	Philadelphia	117	40	67.9	+ 5.7	94	23	40	3	39	1.68	− 1.52	0.86	0	7	15	9	7	ne.	U. S. Weather Bureau.
Pocono Lake	Monroe	1,662	9	61.0	.....	94	22	20	5	50	2.59	.....	1.12	0	7	11	10	10	w.	Pocono Lake Ice Co.
Reading	Berks	280	38	68.0	+ 6.3	94	19	32	5	41	3.54	− 0.47	1.54	0	9	.....	.....	.....	.....	Wm. B. Schuck.
Scranton	Lackawanna	805	11	65.8	+ 7.0	93	22	33	3	35	2.26	− 1.18	0.80	0	10	11	9	11	s.	U. S. Weather Bureau.
Selinsgrove	Snyder	455	23	66.0	+ 4.6	94	22	26	4	44	2.59	− 1.87	1.37	0	8	0	28	3	se.	J. M. Boyer, C. E.
State College	Center	1,191	23	65.4	+ 6.3	91	22	31	3	34	2.42	− 1.81	0.68	0	10	.....	.....	.....	sw.	Prof. Wm. Frear.
Towanda	Bradford	754	16	63.8	+ 5.3	92	23	25	5†	40	2.30	− 0.81	0.96	0.1	11	15	7	9	e.	Hiram E. Bull, C. E.
Wellsboro	Tioga	1,327	34	62.8	+ 5.8	95	22	22	4	45	1.83	− 2.50	0.61	0	7	18	13	0	sw.	O. L. White.
West Chester	Chester	455	57	67.4	+ 6.9	93	23†	35	3	34	1.17	− 3.41	0.67	0	6	16	8	7	w.	J. C. Green, D. D. S.
Williamsport	Lycoming	530	21	67.0	+ 6.4	92	23†	31	4†	36	1.28	− 1.44	0.33	0	6	22	1	8	nw.	Henry H. Guise.
New Jersey.																				
Asbury Park	Monmouth	22	23	59.1	+ .4	82	13	35	4	32	0.31	− 3.40	0.12	0	3	17	7	7	s.	B. H. Obert.
Atlantic City	Atlantic	16	38	59.4	+ 1.9	84	19	38	3	25	0.50	− 2.50	0.25	0	5	15	10	6	s.	U. S. Weather Bureau.
Bayonne	Hudson	50	21	63.8	+ 3.5	89	18	37	3†	34	0.76	− 2.82	0.45	0	8	13	10	8	se.	John H. Eadie.
Belvidere	Warren	289	20	65.7	+ 5.0	93	23	30	4	43	2.95	− 0.94	1.25	0	7	16	8	7	.....	Samuel J. Hixson.
Bergen Point	Hudson	37	14	63.8	+ 4.1	89	12	36	3	34	0.73	− 3.25	0.30	0	8	10	16	5	se.	Dr. William H. Mitchell.
Boonton	Morris	413	21	.....	.....	.....	.....	.....	.....	.....	1.12	− 3.13	0.58	0	7	.....	.....	.....	.....	Foster Peer.
Bridgeton	Cumberland	30	30	67.7	+ 3.8	95	23	33	3	40	1.38	− 2.55	0.68	0	3	15	9	7	sw.	Henry A. Jorden.
Burlington	Burlington	12	27	.....	.....	.....	.....	.....	.....	.....	1.18	− 3.05	0.96	0	4	15	11	5	.....	D. S. B. McCoy.
Canton	Salem	24	17	.....	.....	.....	.....	.....	.....	.....	1.59	− 2.13	0.70	0	5	15	9	7	.....	John H. Maskell.
Cape May City	Cape May	17	27	61.0	+ 2.4	84	13	42	3	25	0.41	− 2.58	0.10	0	8	18	11	2	ne.	U. S. Weather Bureau.
Charlotteburg	Passaic	719	19	62.6	+ 5.3	93	22	25	4	41	1.44	− 3.36	0.65	0	6	14	12	5	se.	George S. Briggs.
Chatham	Morris	234	9	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.30	0	8	.....	.....	.....	.....	M. A. Butler.
Clayton	Gloucester	126	18	67.2	+ 5.3	99	19	33	4	40	0.90	− 2.36	0.44	0	6	17	7	7	sw.	William T. Farley.
College Farm	Middlesex	100	16	65.4	+ 5.9	91	22†	33[a]	3	40[a]	1.55	− 2.35	0.75	0	10	14	11	6	sw.	George B. Thrasher.
Culvers Lake	Sussex	848	10	.....	.....	.....	.....	.....	.....	.....	1.23	− 2.92	0.30	0	9	15	9	7	se.	Brice E. Riker.
Dover	Morris	600	27	63.0	+ 4.4	91	11†	30	4	37	1.39	− 2.75	0.58	0	8	6	17	8	.....	William C. Harris.
Elizabeth	Union	33	32	66.8[b]	+ 4.6	92	11	38	4	36[c]	1.06	− 2.86	0.76	0	5	13	10	8	e.	William M. Oliver.
Flemington	Hunterdon	187	23	65.9	+ 6.0	94	22	29	4	44	1.64	− 2.65	1.33	0	6	15	9	7	e.	Hiram E. Deats.
Haddonfield	Camden	75	24	66.6	+ 4.9	94	23	33	4	39	0.57	− 3.34	0.17	0	10	10	17	4	ne.	Charles F. Richardson.
Hammonton	Atlantic	103	13	.....	.....	.....	.....	.....	.....	.....	2.46	− 1.56	2.07	0	5	.....	.....	.....	.....	Orville Bassett.
Hightstown	Mercer	119	19	65.3	+ 4.2	95	19	30	4	41	1.19	− 2.63	0.69	0	7	15	10	6	sw.	Ernst Wenger.
Highwood	Bergen	90	...	62.7	.....	89	22	27	4	43	1.59	.....	0.52	0	12	.....	.....	.....	se.	Charles J. Bates.
Indian Mills	Burlington	76	22	65.8	+ 3.8	96	23	28	4	44	1.19	− 2.85	0.74	0	5	14	10	7	sw.	James Armstrong.
Jersey City	Hudson	15	13	65.4	+ 4.3	87	13	37	3	34	1.05	− 2.13	0.65	0	10	10	15	6	se.	Samuel K. Pearson, jr.
Lakewood	Ocean	54	9	63.4	.....	91	11	30	4	37	0.55	.....	0.24	0	4	14	10	7	se.	Ralph Robertson.
Lambertville	Hunterdon	95	25	66.8	+ 5.1	92	19†	33	4	40	1.73	− 2.34	1.15	0	6	15	10	6	sw.	William R. Bowne.
Layton	Sussex	550	12	63.2	+ 5.3	94	22†	22	4	47	1.35	− 1.98	0.31	0	10	15	11	5	sw.	Warren C. Hursh.
Little Falls	Passaic	175	8	.....	.....	.....	.....	.....	.....	.....	2.44	.....	1.15	0	9	.....	.....	.....	.....	A. Sweetman.
Mahwah	Bergen	312	9	.....	.....	.....	.....	.....	.....	.....	1.55	.....	0.50	0	6	.....	.....	.....	.....	C. L. Barker.
Moorestown	Burlington	71	49	66.9	+ 5.8	97	23	34	4	39	1.15	− 2.88	0.59	0	7	18	7	6	e.	John C. Beans.
Newark	Essex	140	68	65.4	+ 4.6	91	18	35	3	37	2.94	− 1.10	2.58	0	7	13	11	7	se.	Prof. William Wiener.
New Brunswick	Middlesex	61	58	65.7	+ 5.1	94	12	31	4	40	1.35	− 2.56	0.72	0	8	15	11	5	.....	William T. Woerner.
Northfield	Atlantic	.....	4	.....	.....	.....	.....	.....	.....	.....	0.59	.....	0.35	0	4	.....	.....	.....	.....	William L. Flick.
Paterson	Passaic	80	40	64.8	+ 3.5	91	22	31	4	37	1.37	− 3.12	0.56	0	6	9	17	5	s.	Heber A. Probert.
Phillipsburg	Warren	363	14	66.2	+ 4.9	95	22†	32	4	40	3.84	− 0.21	2.07	0	9	15	8	8	n.	D. W. Smith.
Plainfield	Union	100	25	65.2	+ 4.9	94	22	30	4	41	1.66	− 2.17	1.04	0	6	13	13	5	sw.	John Neagle.
Pleasantville	Atlantic	26	13	.....	.....	.....	.....	.....	.....	.....	0.48	− 2.88	0.28	0	4	15	10	6	.....	Lincoln Van Gilder.
Pompton Plains	Morris	195	9	.....	.....	.....	.....	.....	.....	.....	1.54	.....	0.69	0	8	.....	.....	.....	.....	M. S. Taylor.
Rivervale	Bergen	70	20	63.5[d]	+ 4.4	89	22	24	4	41[c]	0.82	− 3.61	0.25	0	7	11	15	5	.....	Garrett S. M. Holdrum.
Somerville	Somerset	76	28	66.2	+ 6.1	94	22	29	4	42	1.50	− 2.62	0.93	0	6	15	10	6	sw.	Peter Hardcastle.
South Orange	Essex	200	41	64.2	+ 4.2	88	11	32	4	32	1.98	− 1.48	1.67	0	7	13	13	5	s.	Dr. W. J. Chandler.
Sussex	Sussex	442	21	64.1	+ 4.2	96	22	26[a]	4	42[a]	1.00	− 2.91	0.25	0	9	15	7	9	sw.	George Dymock.
Tuckerton	Ocean	23	18	61.8	+ 2.1	90	30	30	4	39	0.68	− 2.75	0.31	0	5	15	10	6	se.	F. R. Austin.
Vineland	Cumberland	118	42	66.8	+ 4.6	97	19	32	4	41	0.54	− 3.23	0.43	0	5	15	10	6	se.	Alfred Chalmers.
Woodbine	Cape May	43	20	64.7[a]	+ 4.3	92	18	35	3†	40[a]	2.42	− 1.48	1.54	0	5	14	12	5	.....	Prof. H. A. Dodge.
West Virginia.																				
Bayard	Grant	2,500	10	60.6	+ 3.4	90	22	22	5	45	2.71	− 1.37	0.68	T.	9	20	6	5	w.	Solomon Clark.
Burlington	Mineral	875	17	66.5	+ 5.0	94	21	27	5	51	0.20	− 3.83	0.10	0	2	16	15	0	w.	J. W. Vandiver.
Franklin	Pendleton	.....	5	64.9[b]	.....	91	22	28	6	42[b]	0.03	.....	0.02	0	2	24[b]	4[b]	1[b]	.....	A. A. Martin.
Lost City	Hardy	.....	5	63.0	.....	86	11	30	6	42	1.95	.....	0.64	0	6	20	11	0	w.	B. D. Hinegardner.
Martinsburg	Berkeley	435	19	69.9	+ 7.2	98	19	36	4†	45	1.48	− 2.40	0.76	0	5	25	5	1	s.	G. W. Van Metre, C. E.
Moorefield	Hardy	900	15	65.0	+ 2.0	94	17	29	6	43	6.35	+ 2.78	2.25	T.	5	15	15	1	s.	John C. Fisher.
Romney	Hampshire	824	14	67.4	+ 4.6	98	19	29	5	44	0.87	− 1.88	0.42	0	4	20	9	2	w.	John C. Linthicum.
Upper Tract	Pendleton	1,230	14	64.2	+ 2.5	92	11†	29	6	40	1.89	− 1.75	1.08	0	5	20	4	7	w.	J. M. Mallow.
Maryland.																				
Annapolis	Anne Arundel	45	33	71.6[c]	+ 7.7	95[c]	19	37	3	39[c]	1.51	− 2.88	1.11	0	5	28	2	1	s.	J. S. Golden.
Baltimore	Baltimore	115	41	69.4	+ 5.2	95	18	41	3	32	3.45	− 0.11	2.05	0	7	15	11	5	s.	U. S. Weather Bureau.
Cambridge	Dorchester	25	13	70.8	+ 5.0	98	19	38	6	35	0.36	− 3.30	0.27	0	2	23	6	2	ne.	T. E. Keenan.
Cheltenham	Prince George	230	11	69.2	.....	94	18†	34	3	36	0.36	.....	0.12	0	5	23	7	1	nw.	J. E. Burbank.
Chestertown	Kent	80	26	69.2	+ 6.4	94	19†	39	3†	34	T.	− 3.95	T.	0	0	25	5	1	se.	M. W. Thomas.
Chewsville	Washington	530	14	66.8	+ 5.5	95	19	32	4†	38	1.98	− 1.71	1.19	0	4	13	18	0	se.	D. Paul Oswald.
Clear Spring	do	650	14	67.4	+ 5.6	95	19	30	2	37	1.58	− 2.06	0.80	0	4	19	12	0	w.	W. W. Frantz.
Coleman	Kent	80	13	68.1	.....	94	19	39	3	32	2.01	− 1.22	1.25	0	4	22	6	3	sw.	J. S. Harris.
College Park	Prince George	170	21	67.6	+ 4.7	95	18†	30	6	43	0.73	− 3.05	0.45	0	4	26	5	0	se.	Prof. H. J. Patterson.
Darlington	Harford	300	19	67.0	+ 4.7	93	19	32	3†	35	0.82	− 2.80	0.70	0	4	13	17	1	sw.	Prof. A. F. Galbreath.
Denton	Caroline	42	16	67.6	+ 4.3	97	19	32	3†	44	0.25	− 3.07	0.10	0	5	29	2	0	s.	H. B. Mason.
Easton	Talbot	35	20	67.2	+ 3.6	92	19	35	6	34	0.21	− 3.32	0.11	0	3	26	4	1	sw.	Henry Shreve.
Emmitsburg	Frederick	720	38	69.8	+ 8.1	97	19	35	3	34	2.23	− 2.22	0.49	0	6	22	9	0	w.	J. H. Eckenrode.
Fallston	Harford	450	41	66.8	+ 5.5	93	19	33	3	33	0.54	− 3.40	0.38	0	4	4	27	0	e.	J. H. Curtiss.
Frederick	Frederick	275	34	69.2	+ 5.8	96	19	34	6	38	1.19	− 2.55	0.51	0	6	16	8	7	ne.	Chas. S. Birely.
Frostburg	Allegany	1,929	10	66.5	.....	92	18†	30	5	35	0.73	.....	0.38	T.	8	12	17	2	nw.	R. A. Walter.
Great Falls	Montgomery	200	20	68.1	+ 3.8	98	19	31	6	40	0.47	− 2.74	0.22	0	5	17	7	7	se.	J. W. Bissett.
Green Spring Furnace	Washington	450	19	68.6	+ 5.5	97	19	35	4	40	0.93	− 2.80	0.36	0	5	26	4	1	nw.	E. G. Kinsell.
Keedysville	do	400	7	69.2	.....	100	19	31	5	43	1.56	.....	0.85	0	5	21	9	1	s.	J. A. Miller.
Lake Montebello	Baltimore	200	2	68.2	.....	94	18†	38	3	37	2.74	.....	1.99	0	6	25	4	2	s.	Martin L. Dobler.
La Plata	Charles	190	2	68.0	.....	97	18†	36	7	42	0.51	.....	0.51	0	1	29	0	2	se.	Prof. R. Lee Reich.

TABLE 1.—*Climatological data for May, 1911. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maryland—Continued.																				
Laurel	Prince George	150	17	67.6	+ 4.0	96	19	31	6	42	1.51	− 2.05	0.58	0	5	11	20	0	.....	Dr. T. M. Baldwin.
Leonardtown	St. Marys	.....	1	69.4	.....	95	19	33	3	32	0.33	.....	0.19	0	3	28	2	1	s.	Brother Fidelis.
Monrovia	Frederick	630	24	68.8	+ 5.5	97	19	33	3	34	1.15	− 2.54	0.64	0	4	19	12	0	s.	J. H. Lawson.
Pocomoke City	Worcester	37	18	68.0	+ 2.9	94	20	39	6	30	0.29	− 2.69	0.29	0	1	23	7	1	s.	Hon. R. M. Stevenson.
Porto Bello	St. Marys	38	6	66.5[1]	.....	92	31	37	3	29[1]	.....	.....	.....	0	.....	.....	.....	.....	.....	R. M. Coad.
Princess Anne	Somerset	17	18	65.6	+ 3.0	90	20†	32	6	37	0.60	− 2.38	0.44	0	2	4	24	3	sw.	J. R. Stewart.
Salisbury	Wicomico	23	6	68.0	.....	98	20	32	6	42	0.18	.....	0.12	0	4	16	14	1	sw.	W. E. Downing.
Solomons	Calvert	20	20	68.6	+ 3.8	89	22†	40	3	29	1.00	− 2.22	0.74	0	3	9	11	11	se.	Dr. W. H. Marsh.
State Sanitarium	Frederick	1,200	3	68.3	.....	92	19	34	3	36	1.60	.....	0.68	T.	4	25	5	1	sw.	Joseph V. Shimek.
Sudlersville	Queen Anne	65	12	68.7	+ 4.8	97	19	35	3	38	0.39	− 2.92	0.28	0	4	23	4	4	e.	Jas. E. Higman.
Takoma Park	Montgomery	320	13	67.4	+ 4.1	93	19	35	3	39	0.39	− 2.88	0.16	0	4	6	23	2	.....	L. M. Moarers.
Taneytown	Carroll	450	12	68.4[1]	+ 6.4	99	20	35[1]	3†	48[1]	1.81	− 2.20	1.00	0	4	18	12	1	.....	James B. Galt.
Towson	Baltimore	465	3	68.2	.....	96	19	34	3	37	0.99	.....	0.61	0	6	25	5	1	se.	C. W. E. Treadwell.
Van Bibber	Harford	100	14	66.3	+ 3.4	93	18†	34	3†	38	2.77	− 1.67	1.77	0	5	3	27	1	.....	W. Benj. Ford.
Westernport	Allegany	1,000	17	66.4	+ 4.4	95	11†	29	5	45	1.16	− 2.96	0.38	0	6	.....	.....	.....	.....	Prof. O. H. Bruce.
Woodstock	Baltimore	392	37	69.8	+ 6.9	93	18	36	6	38	0.57	− 3.30	0.17	0	5	22	8	1	se.	Rev. A. J. Donlon, S. J.
Delaware.																				
Delaware City	New Castle	20	9	66.8	.....	91	23	37	3	34	0.58	.....	0.52	0	2	29	1	1	s.	H. Morton Price.
Dover	Kent	40	23	68.6	+ 5.0	96	18	34	3	35	1.24	− 2.42	0.49	0	4	21	7	3	e.	Thos. F. Dunn.
Milford	....do	20	27	68.2	+ 5.3	95	18	35	3	37[a]	0.36	− 3.59	0.24	0	3	22	8	1	e.	C. J. Holzmueller.
Millsboro	Sussex	20	19	65.0	+ 2.0	91	11	33	7	40	0.53	− 3.28	0.31	0	2	27	3	1	ne.	Rev. L. W. Wells.
Seaford	....do	40	18	67.6	+ 4.3	96	19	35	6	37	0.72	− 3.48	0.50	0	3	27	3	1	s.	E. B. Brown.
District of Columbia.																				
Washington	.....	112	41	70.0	+ 5.8	96	19	37	6	35	0.87	− 2.96	0.69	0	7	23	5	3	s.	U. S. Weather Bureau.
Virginia.																				
Culpeper	Culpeper	450	3	69.7	.....	95	20†	33	3	38	0.95	.....	0.85	0	2	10	21	0	se.	Col. H. C. Burrows.
Dale Enterprise	Rockingham	1,350	32	65.6	+ 2.7	94	18†	24	3	46	0.42	− 4.10	0.25	0	6	9	19	3	s.	Rev. L. J. Heatwole.
Doswell	Hanover	134	10	70.6	.....	98	18†	32	3	42	0.33	.....	0.20	0	2	24	6	1	s.	Rich., Fdksbg. & Pot. R. R.
Eastville	Northampton	15	1	68.4	+ 2.7	94	20	40	5	33	1.13	− 3.30	1.00	0	4	20	9	2	se.	Thos. B. Robertson.
Fredericksburg	Spottsylvania	100	22	70.0	+ 4.9	98	18†	32	3	38	1.29	− 2.87	0.53	0	6	21	9	1	e.	S. G. Howison.
Lincoln	Loudon	500	10	71.6	+ 8.2	102	22	33	6	51	0.83	− 3.61	0.44	0	4	9	21	1	ne.	Dr. Geo. Roberts.
Mount Weather	....do	1,726	7	66.6	+ 7.1	88	18	33	3	26	1.64	− 2.11	0.97	0	7	19	10	2	w.	U. S. Weather Bureau.
Quantico	Prince William	16	14	69.0	+ 5.2	95	20	32	3	36	0.47	.....	0.47	0	1	26	4	1	se.	Rich., Fdksbg. & Pot. R. R.
Staunton	Augusta	1,380	19	68.1	+ 4.8	93	18†	31	3	39	1.29	− 2.63	0.47	0	8	14	15	2	sw.	Ernest Nothnagle.
Warsaw	Richmond	160	19	70.2	+ 4.8	97	19†	33	3	41	0.29	− 3.37	0.18	0	5	10	19	2	s.	C. H. Constable.
Woodstock	Shenandoah	927	15	68.0	+ 4.3	97	18	34	6	47	1.70	− 2.04	0.68	0	5	12	19	0	w.	Mrs. A. G. Miley.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
**Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
†Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 1, North Atlantic States.*

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Maine.																																	
Ashland	St. John	T.	.34																				.40			.41				.17			1.32
Bar Harbor	Coast			T.						T.			T.	T.		T.	T.			T.			T.	T.	T.				T.	T.		T.
Cornish	Saco		.20	T.						T.			.08								T.			.05	.10	.19		.02		.30		.06	1.00
Danforth	Penobscot																							.05		.15				T.			0.20
Eastport	Coast	T.	.06	T.				T.				.01		.02								.01	T.		.03					T.			0.13
Eustis	Kennebec		.02	.03	T.														T.						.53	.04	T.			.01			0.63
Fairfield	....do	.15																					.45	.16	.27							.31	1.34
Farmington	....do	T.	.30	T.															T.					.60	.08	.22								1.20
Gardiner	....do		.05											.08											.25	.14				.58				1.10
Greenville	....do	.09	.10	T.	T.						T.					T.			.06	T.			.05		.04	.04	.02			T.				0.40
Houlton	St. John																									.03								0.03
Howe Brook	Penobscot		.25	.10																							.15							0.50
Lewiston	Andr'sc'g'in		.28	T.								T.		.03											.25	T.				T.				0.56
Madison	Kennebec	T.	.24																				.13			.22								0.59
Millinocket	Penobscot		.12		T.																			.15		.24								0.51
North Bridgton	Saco		.18	.01						.01															.23	.02							.90	1.35
Oquossoc	Andr'sc'g'in																																	
Orono	Penobscot		.09	T.																			.08	.10	.15					.33				0.75
Patten	....do		.40	T.																			.04			2.00	.14							2.58
Portland	Coast		.02	T.									.38						T.			.01	.01	.01	.54					.02	.01	.37	1.37
Presque Isle	St. John	T.	.30	T.												.04								T.										0.34
Rumford Falls	Andr'sc'g'in		.23	T.												T.			T.					T.	.18	.29						.18	0.88
The Forks	Kennebec																																	
Winslow	....do	.10											T.			T.							.06		.45					T.			0.61
New Hampshire.																																	
Alstead Center	Connecticut		.58							.03				.04					T.	.08					.09	.63	.02				.23	T.		1.70
Benton	....do	.68		T.																						.35	.20			T.		1.05	2.28
Bethlehem	....do	.12	.24	T.												T.			.03						.31	.30	.08			.02		T.	1.10
Brookline	Merrimack	.15			T.								.08							.10				.10	.30	.55			.12			.24	1.64
Concord	....do		.15	T.	T.					T.			.27						.04	.32	T.			T.	.32	.37				.05		.05	1.57
Durham	....do		.05							.02			.04							.03					.56							.40	1.10
Franklin	....do		.29	T.	T.					.03				.07					T.					T.	.21	.13	T.			T.	.05	T.	0.78
Grafton	....do	T.	.25	.08									.02				.02		.05						.05	.45				.47			1.39
Hanover	Connecticut	T.	.31	.02								T.	.02				.02	T.	.16				T.		.01	.63	.08			.04			1.29
Keene	....do		.38	T.						T.			.30	.06					.02	.05			T.	T.	.05	.02				T.	T.	T.	0.88
Nashua	Merrimack		.08		T.							T.	.07							.31					.66	.26	.01			.01	T.	.07	1.47
Newton	....do	.01			*					T.									T.	.15				.15	.18	T.	T.			.04	T.	.15	0.68
Plymouth	....do		.22	T.										T.										.19	.12	.20				.03		T.	0.76
Vermont.																																	
Bloomfield	Connecticut	.08	.34	.04												T.	.13								.22	.09	.18						1.08
Cavendish	....do	T.								T.			T.					T.		T.					T.	.26				.20	.01	T.	0.47
Chelsea	....do	.02	.18	.04								T.				.02									.08	.07				.01		.02	0.44
Jacksonville	....do	.75								T.	T.		.15		.21									.15	.10	.05					.65	2.06
Manchester	Hudson		.19										.04						T.	T.					.06	T.					T.		0.29
St. Johnsbury	Connecticut	.01	.26	T.												T.	.01		.03						.35	.33	.07			.02			1.08
Vernon	....do	.20								.01			.55							44					.10	.02						.45	1.77
Woodstock	....do	.65													.03			.02						.03	.44			.66				.56	2.39
Massachusetts.																																	
Amherst	Connecticut	.08	.09										.12							.10	.01				.04	.58						.35	1.37
Ashland	Merrimack								.05	.04							.02			.52	.04			.01		.18						.19	1.05
Bakers Bridge	....do									T.									T.							1.15					T.	1.15
Bedford	....do	T.								T.				.01					T.	.24		.01				.79					T.	T.	1.05
Blue Hill	Coast	.07	T.							.20	.03		T.				.06		T.	.10					.02	.39	T.				T.	.02	0.89
Boston	....do	T.	T.						.10	.01			T.			T.	T.		T.	T.					.05	.17	T.					.02	0.35
Chestnut Hill	....do	T.							.09	.04							T.		.04					.12		.18						.11	0.58
Clinton	Merrimack																		.01	.36					.40	.43						.21	1.41
Concord	....do	T.								T.	T.		T.	.01			T.		T.	.03					T.	.25	T.					T.	0.29
Fall River	Coast								.35	.20				.01			.18	.01		.90						.20					.07	.03	1.95
Fitchburg	Merrimack	T.	.08											.04					.01	.09	T.				.10	1.40						.08	1.80
Framingham	....do								.04	.02										.32				.02	.02	.15						.15	0.72
Haverhill	....do	T.	T.							T.	T.	T.		.02					.01	.45					T.	.03	T.				.02	T.	0.53
Hingham	Coast	T.							.14	.09							.04		T.							.15	T.				T.	T.	0.42
Hyannis	....do	.04								.05			*	.03			.21			.29	.02				.03	.04					.05		0.76
Jefferson	Merrimack	.09																		.83				.17		.46						.36	1.91
Lake Cochituate	....do								.04											.14				.01		.29						.17	0.65
Lawrence	....do	T.								T.		T.	.05			T.			T.	.25				T.	T.	T.					T.	T.	0.30
Leominster	....do	T.	.08										T.						.01	.08	T.				.10	.47	T.				T.	.12	0.86
Lowell	....do											.02	.02							.08						.61						.08	0.81
Middleboro	Coast	T.	T.						.17	.17				T.			.12		T.	.34					T.	.17	T.				T.		0.97
Monson	Connecticut												T.			T.			T.	.22					.20	.07					.05	.05	0.59
Nantucket	Coast	.02	T.							.20	.02						.10			.42					.01	.01	.04				T.		0.82
New Bedford	....do	.06							.17	.40							.07			.72											.03		1.45
Norfolk	....do	.03								.09	.06						.04		T.	.55						.86					T.	T.	1.63
Northampton	Connecticut																																
Plymouth	Coast	.03								.18	.19						.11			.10					T.								0.61
Princeton	Merrimack	.10																		.43					*	.83						.40	1.76
Provincetown	Coast									T.										.17					.10	T.					T.		0.27
Rockport	....do									.05	.10									.70					.05								0.90
Rutland	Connecticut	T.	T.									T.							*	.95					*	.92						T.	1.87
Somerset	Coast								.31	.21				.01			.08	.01		.65					T.	.40					.01		1.68
South Egremont	Housatonic	.40											.10			.02	.04			.21					.06					.32		.28	1.43
Spot Pond	Coast								.05	.02									*	.61				.14		.09				.02		.08	1.01
Springfield	Connecticut	T.								T.				.06			T.		.04	.23	T.				.29	.51				.46	.04	.71	2.34
Sterling	Merrimack																			.38					T.	.12	.41					.35	1.26
Taunton	Coast	T.	T.							*	.42	T.		T.			.15	T.	T.	.41					*	.13					T.	T.	1.11
Turners Falls	Connecticut	.26								T.				.22					.05	.87					.07	.15							1.62
Westboro	Merrimack									.16							T.		.03	.66				T.	.05	.45						T.	1.35
Williamstown	Hudson		.73							T.	.02		.29	.08			T.	T.	.04	.35					.06	.05							1.62
Winchendon	Connecticut		.22										.12						.04	.05				.05	.20	.04						.03	0.75
Worcester	Coast	.01		T.						.03			.44				.01		.02	1.42	T.			.47	.62	.59							3.66
Rhode Island.																																	
Block Island	Coast	.04	.06						.55	.21								.03	T.	.03					.05	.09				.02			1.08
Bristol	....do	T.							.34	.21				.02			.11			.37					T.	.08					.11	T.	1.24
Greene	....do	.02								.15	.09			.02			.04	.02		.03	.02					.31						.05	0.75

TABLE 2.—*Daily precipitation for May, 1911. District No. 1*—Continued.

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Rhode Island—Con.																																	
Hope Valley	Coast	.01								.36							.10	.05		T.					.05	1.33				T.	.05	1.95
Kingston	do								.42	.17				.05			.05	.08		.03					.03	1.05				.07	.02	1.97
Narragansett Pier	do	.05								.47	.20						.04		T.	.07					T.	.74				.11		1.68
Pawtucket	do								.29	.08							.08		*	1.09					*	.07	.44			.01	.07	2.13
Providence	do	T.	T.						.33	.05			T.	T.			.09	T.	T.	.62					.01	.88	T.			T.	T.	.06	2.04
Wallum Lake	do	.03							.20												.30					.35				.05	.05	.22	1.20
Connecticut.																																	
Bridgeport	Coast	T.							.03	.05				.02			T.	.02	T.	.40	T.	.02			T.	.43				T.	.15	1.12
Canton	Connecticut	T.							.02	T.			T.				.14		.03	.31					.72	.25			.56	T.	.57	2.60
Colchester	Coast	.06							.07				T.	T.			T.	.08	T.	.15					.09	.39	T.			T.	T.	0.84
Cream Hill	Housatonic		.27											T.			.20		T.	.81			.92	.21		.09			.40	.11	.02	3.03
Danielson	Coast									.10																1.25					.16	1.51
Falls Village	Housatonic	.27							.03	T.			.15				.14			.67			1.02		.21	T.			.28	.06	.30	3.13
Hartford	Connecticut	T.							.01	.03	T.		T.				.05	T.	.03	.19	T.	T.			.19	.03			.49	.01	.19	1.22
Hawleyville	Housatonic	.50	.20							.50				.50				.14	.35	.23						.45	.30						3.17
Lake Konomoc	Coast									.15																	.20					0.35
New Haven	do	T.							.04	T.		.01	.01	.02			.01	.03	T.	.12	.01	.02		T.	.09	.18				T.	.20	0.74
New London	do								.04	.05							T.			.01					.20	.22				.01	.21	0.74
N. Grosvenor Dale	do	.03								.03							.03			.05							.01			.10	.10	0.35
Norwalk	do									.05		.03	.08	.05				.18	.52						.25	.03					.41	1.60
Southington	do	T.								T.							T.			.10					.10							0.20
South Manchester	Connecticut												.03				.02		.01	.31					.38	.04					.30	1.09
Storrs	Coast																			T.			T.		.06						.27	0.33
Torrington	Housatonic																															
Voluntown	Coast																															
Wallingford	do	.04							.07	.01	.02					T.	.06		.02	.05				.02	.28	.21				T.	.35	1.13
Waterbury	Housatonic	.04							.01	.06			.10				.10			.25					.02	.29				T.	T.	0.87
West Simsbury	Connecticut	.01								T.			T.				.01		.01	.25					.25	.12			.62	T.	.59	1.86
New York.																																	
Addison	Susque'na	.48	.11	T.							.02		T.				.05	.15	.14	.76				.28	T.	.05					.52	2.56
Albany	Hudson	.27	.16	T.						T.			.06				.06		T.	.75				.17	.05	.27	.01			T.	.35	2.15
Alfred	Susque'na	.35	.04								.06						.12		T.	1.74	.11		T.	.25	.07						.79	3.53
Amsterdam	Mohawk	.02	.80	T.						T.			T.						T.	.15	T.				.33	.20				T.		1.50
Athens	Hudson		.20	T.						T.		T.	.10				T.	.05	.01	1.16					.18	.32				.01	.34	2.37
Bainbridge	Susque'na	.21	.46								.18			.15		.04		.30						.97		.84						3.15
Ballston Lake	Hudson	T.	.95	T.						T.	T.	T.	T.	T.			T.	T.	T.	.07				T.	.27	.28	.04			T.	T.	1.61
Bedford	Coast		.05	T.					.01	.13		.01		.05				.06	.63	.21	.01				.04						.05	1.25
Binghampton	Susque'na	.32	.01	T.							.03		.07				.08	.02	.07					.35	.30				T.		.69	1.94
Blue Ridge	Hudson	.17	.63																						.70	.25						1.75
Bouckville	Susque'na	.05	.41	T.									.03					.02	.06	.66				.22	1.33	.15					.37	3.30
Carmel	Hudson	.02	.12						.21				.02	.10			.14		1.00		.99	.03			.03	.09						2.75
Chatham	do	T.	.25	T.								.18	*	.03			.03	.05		.30					.03	.13						1.00
Cooperstown	Susque'na	.35															.14	.08		.50				.60	.33	.07					.70	2.77
Corinth	Hudson	.35																		.70	.45					.20	.28					1.10	3.08
Cortland	Susque'na	.01	1.43	T.														.04	.06						.66							2.20
Cutchogue	Coast	.05						.38						.05			T.			.18					.07	.04						.15	0.92
De Ruyter	Susque'na	.10	1.04	T.													.11		.38	.34	T.		T.	.03	.36	.09					.60	3.05
Easton	Hudson	.52											T.													1.11						1.63
Glens Falls	do	.03	.36																.10	.18					.45	.34						1.46
Gloversville	Mohawk	.10	.38							.03									T.	.04					.38	.22					.10	1.25
Greenfield Center	Hudson	.12	.50																	.35					.40	.22					.09	.75	2.43
Greenwich	do	.07	.80							.02			.01				T.		.10	.98					.12	.36	.10				.30		2.86
Griffin Corners	Delaware		.31	T.									.24				T.	.08	.10						.14						T.	0.87
Haskinville	Susque'na	.30		.05							.07	.15					.17	.18		.17				.90	.14						.74	2.87
Homer	do	.49	.69	T.	T.												T.	.10	.07	T.	T.			.25	.36					T.	.73	2.69
Hoosick Falls	Hudson		.45	T.						T.	.17			.05			T.			1.23	.11				.05	.18	.20				T.	2.44
Indian Lake	do	.20	.75														.20		.30	.41					.71							2.57
Jeffersonville	Delaware	.16		T.								.16					T.	.23	.07		T.	T.		.21	.14					T.	T.	.15	1.12
Knowelhurst	Hudson	.21	.70								.06								.07	1.00			.44		.61	.15						3.24
Liberty	Delaware	.15	.20							.10			.15				.20								.14					.30	.52	1.76
Little Falls	Mohawk		.70	T.														T.		.18				T.	.40	.30				.07	.05	1.70
Mechanicsville	Hudson	.40	T.	T.									T.						.10	.56				.27	.23	.30					.45	2.31
Mohonk Lake	do		.60							.02	.02			.05					.49	.75										.04	.80	2.77
Morehouseville	Mohawk	.35	.70	.02													.05		.03	.32			.60		.85	.10					.45	3.47
Mount Hope	Coast	.40							.20	.25		.12	.22	.35			.10	.20	.40	.20					.20						.90	3.54
Newark Valley	Susq'hanna	.18	.50	.05									T.				.25				T.				.77	.08					.76	2.59
New Berlin	do	.02	.70	.03	T.							.03					.02	.02	.20		.04			.01	.50	.60						2.17
New Lisbon	do		.40	.04															.20	.06					.61	.26					.13	1.70
New York City	Coast	.07							.04	.01	T.	.04	.04	.01			.06	.05	T.	T.				T.	.05						.54	0.91
North Creek	Hudson																		.25	.40					.50						.65	1.80
Northville	do	.73									.10									.17				.90	.13						.97	3.00
Norwich	Susq'hanna	.03	.03	T.													.08	.02								.36	1.84					2.36
Oneonta	do	.05	1.12	T.									.25			.03			.18						.21	.25			T.		.06	2.15
Oxford	do	.15	.37	T.									T.				T.		.31	T.	T.		T.	.27	1.85	.11					.43	3.49
Oyster Bay	Coast		.06							.18	.03	.06	.14							.34					.05						.21	1.07
Port Jervis	Delaware	.10							T.					T.			.20	.05	.01		.06	.03			.03						.63	1.11
Salisbury	Mohawk	.40	.24																	.31					1.20	.03					T.	2.18
Scarsdale	Coast	T.		T.	T.				T.	T.	T.		T.	.05	T.		T.	.10	.57					T.	.15						.60	1.47
Setauket	do	.03	T.						.06	.06		.05		.01			.04	.16	.21	T.				T.	.12	T.					.16	0.90
Sherburne	Susq'hanna	T.	.73	T.													T.	T.	.12						1.76	.37	T.					2.98
Southampton	Coast	T.	.02							.81	.04	T.					T.	.10		T.	.03				.18	.02	.03				T.	1.23
Spier Falls	Hudson	.32								T.									T.	.94					.35	.31						1.92
Trenton Falls	Mohawk	.08	.72	T.	.04							T.					T.		T.		.45				.78	.62						2.69
Tribes Hill	do	.60																		.10					.40						.40	1.50
Utica	do	.14		.17	.12																.27				.14	.08						0.92
Wading River	Coast	*	.04						*	.50	.10	.04					.02	.10	.02	.08	.02				.15	.10					.05	1.22
Wappingers Falls	Hudson	T.	.42						.10				T.				.08		.28	.32						.18				T.	.14	1.52
Warwick	do		.22						.03			.03	.06				.10		.06	.03					.02	.03					.04	0.62
Waverly	Susq'hanna	.10	.42	.02									.05				.05	.16	.05	.10				.12	.65	.02					.61	2.35
Wells	Hudson	.11	.50																.04	.93		*	*	1.30		1.05						3.93
West Berne	Mohawk			.38										T.			T.	T.	T.	.08					.03	.07						0.56
West Point	Orange	.02	.05						.11	.02			.08				.04		.11	.10					.04							0.57
Windham	Mohawk		.33	T.							T.	.07	.40	.42			.04	.12	.12	T.					.18	.13						1.81
Pennsylvania.																																	
Altoona	Susque'na	T.	.22									T.								T.	T.			T.	.13					2.11	T.	2.46
Ansonia	do		.53									.08						.21	.04	T.	T.				.09							0.95
Bellefonte	do	.79										.61				.86				.40				.09					.28		.33	3.36

TABLE 2.—*Daily precipitation for May, 1911. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Pennsylvania—Con.																																	
Bethlehem	Lehigh	T.	.63		T.				T.	T.			.10				.07		.05	T.				T.							.70	1.55
Browers Lock	Schuylkill		.80	.33														.06													1.68	2.87
Catawissa	Susque'na	.08								T.	.08	.20	T.				.10							.23						.12	.41	1.22
Center Hall	do	.65								T.		.50								2.70				1.00						.95	.30	6.10
Clearfield	do	.01	T.									.03	.02					T.		T.				.60	.07						.61	1.34
Coatesville	Coast	.06	.20														.02								.06						.89	1.23
Doylestown	Schuylkill	.70																													1.28	1.98
Drifton	Susque'na			T.					T.		T.	.50	.05				.20			.25				.12						.18	2.25	3.55
Emporium	do	.36	T.		T.					T.	.18	.13					.32	.04	.05	T.			.12	.45							.30	1.95
Ephrata	do	.03										T.					T.	T.			.18				.04						.76	1.01
Everett	Juniata	.25	T.	T.							.03									.05				.06	.05					.10	.05	.06	0.65
Forks of Neshaminy	Delaware	.57							.06					.01			.03								.05							1.78	2.50
George School	do	.04							.17									.05							.11						.80	1.17
Gettysburg	Potomac		.24							.03										T.	1.93			.45	.03					T.	.06	.76	3.50
Girardville	Susque'na	.12									.24						.10	.16		.20				.26	.12					.48		1.68	3.36
Gordon	do		.16						T.			.29					.13	.11			.54				.64							1.03	2.90
Hamburg	Schuylkill	1.75										.57						.24		.40				.89								2.96	6.81
Hanover	Susque'na	.22								.02										1.24				.21								.37	2.06
Harrisburg	do	.59								T.	.10						.01	.03	.05	.15				.11	.08		T.			T.		1.14	2.26
Huntingdon	Juniata	.05	.01							T.		.01								.20			.19	1.10	.03					.41		.18	2.18
Hyndman	Potomac	.20		T.							.04									T.				.20						.17	T.	.32	0.93
Kennett Square	Coast																.10							.51							.09	1.22	1.92
Lansdale	Schuylkill	.34	.48																													1.57	2.39
Lawrenceville	Susque'na	.40	.30								T.						.10	.15	T.	.45	.20			.60	.05							.45	2.70
Lebanon	do	T.	.15									.06					.22	.03	.23						.07							.87	1.63
Le Roy	do	.20	.01	.01						T.	.01	.07					.18	.13	.05	.16				.24	.68	.02						.30	2.06
Lewisburg	do		.08								.11		.01				.29	.40			.01			.78	.32							.13	2.13
Lloyd	do	.20																.20	.32	.72				.05	.03								1.52
Lock Haven	do	T.	.69	T.	.05					T.	.17						.20	.05	.02	T.			.10	.20						.01		.03	1.52
Marion	Potomac										T.								T.					.23	.11							.74	1.08
Mauch Chunk	Lehigh	.02	.20									.07	.05				.06	.04		.52					.18					.09		.62	1.85
Mifflintown	Juniata	.10										.12						.06	.03	.02				.51	.31					.47		.21	1.83
Milford	Delaware		.20							.02		.07		T.			T.	.20	.12	.04	.07			.17	.06	.04				.48	T.	.04	1.51
Montrose	Susque'na	.25	.02								.10		.10					.35	.10	T.				.85		.03						.80	2.60
Mountain House	Juniata	.40																						.28	.38					.13			1.19
Mount Gretna	Susq'hanna	.01	.14							.01		.04	T.				.02	.18		T.				.04	.15							.62	1.21
Muncy Valley	do	.53		T.							T.		T.				.24	T.	.21		T.			.65		T.						.82	2.45
New Germantown	do	.70																							.40							.50	1.60
Ottsville	Delaware	.35	.03											.05				.06							.02							2.15	2.66
Philadelphia (1)	do	T.	.01		T.				.07	T.			T.				T.	T.	.34	T.				.04	.01						.41	.80	1.68
Pocono Lake	do											T.	.25					.19	.18	.28					.05	1.12						.52	2.59
Point Pleasant	do	.38	.07																						.45							1.65	2.55
Pottsville	Schuylkill	.50									.02	.06	.05				.15	.04	.02	.21				.16	.06					.08		1.60	2.95
Reading	do		.41							.02		.01		.37				.10			1.54				.15	.01						.93	3.54
Renovo‖	Susq'hanna		.32									.28						.10			.06				.24								1.00
Scranton	do	.80										.19	.15				.18	.13	.02		.01			.01	.35							.42	2.26
Seisholtsville	Schuylkill		.86											.08			.02			.05												1.40	2.41
Selinsgrove	Susq'hanna	T.	.09									.21					.09	.02			1.37			.74						.02		.05	2.59
Shawmont	Schuylkill		.10						.10			.02	.12						.10		.01			.04							.90	.30	1.69
Smith's Corners	do	.49	.11												.09									.29								1.59	2.57
Spring Mount	do	.10	.05														.02				.04			.07								2.29	2.57
State College	Susq'hanna	.33	T.	T.						T.	.01	.35					T.	.09	T.	.68				.08	.04					.50	.01	.33	2.42
Stroudsburg	Delaware		.22						T.	T.		.03	.07					.20	.08	.45	.10					.15						.35	1.65
Towanda	Susq'hanna	.10	.10	.01							T.	.07	.10				.18	.19	.02	.25	T.			T.	.96	T.						.32	2.30
Wellsboro	do	.61																.28	.09	.07				.31	.06							.41	1.83
West Chester	Coast		.07						.03								.07	.01							.32							.67	1.17
Wilkes-Barre‖	Susq'hanna		.09									.01						.20	.01		T.	.53		.01	.06								0.91
Williamsport‖	do		.28									.33						.14	.05	T.	T.			.23							.25	1.28
New Jersey.																																	
Asbury Park	Coast	T.							.11	T.			.12	.08			T.														T.	0.31
Atlantic City	do		.01						.25	T.			T.	.17			.06	T.	T.						.01					T.	T.	0.50
Bayonne	do	.08	T.						.03	T.		.04	.01	T.			T.	.11	T.	T.					.04	T.						.45	0.76
Belvidere	Delaware	.71										.15						.11	.05	.36	1.25											.32	2.95
Bergen Point	Coast	.13	.01						.05			T.	.02	.02			T.	.10							.10							.30	0.73
Boonton ‖	Passaic	.08	.58							.06		.21		T.				.12			.06					.01						T.	1.12
Bridgeton	Coast								T.				.65				.05														.68	1.38
Burlington ‖	Delaware	.03							.17	T.		T.	.02				T.				T.	T.		T.								.96	1.18
Canton	Coast								.09	T.			.70				.08		.03						T.							.69	1.59
Cape May City	do		.08						.10	.01			.01	.01				.03	T.	.07					T.							.10	0.41
Charlotteburg	Passaic	.26										.17	.16					.16	T.						.04							.65	1.44
Chatham ‖	do	.30	.15								.10	.05		T.				.15		T.	.20				T.	.10						.05	1.10
Clayton	Coast		T.						.12	.01			.05	.03				.25													.44	T.	0.90
College Farm	do	.18							.11				.09				T.	.02		.29	.06	.01			.04							.75	1.55
Culvers Lake	Delaware	.27		T.					T.			.20	.12				.01	.30	T.		.03			.11	.05							.14	1.23
Dover	Passaic	.58							.06	.01		.10					.18			.18					.03							.25	1.39
Elizabeth	Coast								.15				.05					.10							.03							.76	1.06
Flemington	do	.16							.02				T.	T.				.03		T.	.07				.03							1.33	1.64
Haddonfield	Delaware		.02						.11	.01				.03				.02	.17					.12	.01						.05	.03	0.57
Hammonton	Coast								.15	T.				.12			.07		.05												2.07		2.46
Hightstown	Delaware	.25	.03						.12				.04				.03			T.	.03				T.							.69	1.19
Highwood	Coast	.04							.09	T.	.02	.28	.15	.10			T.	.16	.19	.03	T.				.01							.52	1.59
Indian Mills	do				T.				.26				.03	.10				.06	.74					T.								T.	1.19
Jersey City	do	.08							.03	.01		.04	.04	.02				.13	T.	T.				T.	.05							.65	1.05
Lakewood	do								.24	T.			.02	.12			T.			.17												T.	0.55
Lambertville	Delaware	.24							.06									.05		.21					.02							1.15	1.73
Layton	do	.14										.13	.05					.29	.05	.02				.31	.02					.26		.08	1.35
Little Falls	Passaic	.42	T.						.05	T.		.16	.04				.10	.06	T.	.43				T.	.03							1.15	2.44
Mahwah	do	.25												.30					.30	.20												.50	1.55
Moorestown	Delaware	T.	.03						.16	T.	.02			.01			.01	T.		T.				T.	T.						.33	.59	1.15
Newark	Passaic	.08							.02	T.		.10	.03				.10	.03	T.	T.					T.							2.58	2.94
New Brunswick	Coast	.15							.27	.10			.05				.02	.02		T.	T.				.02							.72	1.35
Northfield	do		.01						.35					.21			.02								T.								0.59
Paterson	Passaic	.56							T.	T.	T.	.03	T.				T.	.10	T.	.29	T.			T.	T.							.39	1.37
Phillipsburg	Delaware	.89							T.	.05			.06				.06	.04		.44				.17	.06							2.07	3.84
Plainfield	Coast	.21							.14	T.			T.				T.	.05		.22	T.				T.	T.						1.04	1.66
Pleasantville	do		.02						.28					.08			.10														T.	T.	0.48
Pompton Plains ‖	Passaic	.08	.40							.08	T.	.04		.05			T.	.18		.02	.69				T.	T.							T.	1.54
Riverdale	Coast	.12							.02			.05						.15	.25	.15					.08									0.82
Somerville	do	.23							.05	T.			.01							.22					.06							.93	1.50
South Orange	do	.08							.06	T.	T.	T.	.03	T.			T.	.12		.02	T.	T.			T.							1.67	1.98

TABLE 2.—*Daily precipitation for May, 1911. District No. 1*—Continued.

Stations	River basins	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New Jersey—Con.																															
Sussex	Hudson	.25							.03			.05		.08			.01	.23	.21		.01										.13	1.00
Tuckerton	Coast		T.						.31					.16				.05	.14						.02							0.68
Vineland	do								.04	T.				.43			.02		T.						T.					.05		0.54
Woodbine	do		.06						.13	T.				1.54			.45			.24				T.	T.							2.42
West Virginia.																															
Bayard	Potomac	.26	.15	T.							T.									.36				.36			.39	.10		.68	.28	.13	2.71
Burlington	do	T.								T.										T.				T.			.10			T.		.10	0.20
Franklin	do										.02									.01													0.03
Harpers Ferry‖	do		.58						T.												T.										T.	0.58
Lost City	do	.24									T.									.64				.24			.02			.32	.49	1.95
Martinsburg	do	.76									.15													.12					T.	.08	.37	1.48
Moorefield	do	.75	T.							T.	T.									.29				T.		1.05	T.	2.25	T.		2.01	6.35
Romney‖	do	.24	.10	T.								T.									.42				.11						T.	0.87
Upper Tract	do	T.																		.30	T.				T.		1.08	.16		.10	T.	.25	1.89
Maryland.																															
Annapolis	Coast		.07						.07																.04		T.				.22	1.11	1.51
Baltimore	do	.10							.17	T.			.86						.03					T.	.07		T.				.17	2.05	3.45
Cambridge	do		.27						.09																								0.36
Cheltenham	do		.07						.12	.05														.06	.06								0.36
Chestertown	do		T.						T.					T.																		T.
Chewsville	Potomac	.50							T.	T.	T.	T.								.01				1.19			T.			T.	.28	1.98
Clear Spring	do	.35	.33							T.	T	T.													.80						.10	1.58
Coleman	do		.08						.08					.60					T.					T.							1.25	2.01
College Park	do		.10						.10																.08						.45	0.73
Darlington	Coast	T.	.08						T.	T.				T.				.03	.01						.70						T.	0.82
Denton	do		.10						.04				.01	.03										.07								0.25
Easton	do		.11						.05													.05										0.21
Emmitsburg	Potomac	.47	.48								.02													.48	.29							.49	2.23
Fallston	Coast	T.	.08						.02				T.						T.						.06		T.				T.	.38	0.54
Frederick	Potomac	T.	.51						T.	.02		.04	T.	T.							T.			.26	.05			T.				.31	1.19
Frostburg	do	.38		T.							T.	.03								.08				.01	T.		.07		.03	.03	.10	0.73
Great Falls	do		.06							.04				.13											.02	.22							0.47
Green Spg. Furnace	do	.08	.25																					.36	.16						.08	0.93
Keedysville	do	T.	.85						T.	T.	.04													.01	.04						.62	1.56
Lake Montebello	Coast		.10						.13				.37						T.					T.	.06					.09	1.99	2.74
La Plata	do	T.																													.51	0.51
Laurel	do		.10										.58											.20	.30						.33	1.51
Leonardtown	do		.13						.19	T.															.01		T.						0.33
Monrovia	Potomac		.46						T.	.01			T.																		.64	1.15
Pocomoke City	Coast								.29																								0.29
Princess Anne	do								.16										T.						T.						.44	0.60
Salisbury	do		.03						.12	.02															.01								0.18
Solomons	do		.16						.10																T.		T.				.74	1.00
State Sanatorium	Potomac	.35		T.					T.	T.		T.												.14	.68				T.	T.	.43	1.60
Sudlersville	Coast		.04						.05					.28					T.						T.					T.	.02	0.39
Takoma Park	do		.08							.16															.05	T.					.10	0.39
Taneytown	Potomac		.42																					.19	.20				1.00			1.81
Towson	Coast	T.	.13						.06	T.				.06				T.	.06						.07		T.			T.	.61	0.99
Van Bibber	do								.18				.29											.49	.04						1.77	2.77
Western Port	Potomac	.09																		.32			.03	.02			.38				.32	1.16
Woodstock	Coast	.17							.07	T.				.11				T.						.12	.10						T.	0.57
Delaware.																															
Delaware City	Coast		T.			T.			T.				T.	T.				.52	T.	T.					T.					T.	.06	0.58
Dover	do								.07				.47						.21												.49	1.24
Milford	do		.24						.08		T.			.04				T.						T.								0.36
Millsboro	do		.31						.22																							0.53
Seaford	do		.07						.15											.50				T.								0.72
District of Columbia.																															
Washington	Coast	.05	.03						.04	.04			T.						T.						.02					.10	.59	0.87
Virginia.																															
Culpeper	Rappahannock.								.10																						.85	0.95
Dale Enterprise	Shenandoah.	.04							.01											T.	.03			.04			.25				.05		0.42
Doswell	Pamunkey								.20																						.13		0.33
Eastville	Coast		.02						1.00																.01	.10							1.13
Fredericksburg	Rappahannock.		.03						.16	.03														.53	T.	.04						.50	1.29
Lincoln	Potomac	.33								.02															.04							.44	0.83
Mount Weather	do	.43							.01	.01			.01							.08					.13							.97	1.64
Quantico	do								T.																.47								0.47
Staunton	Shenandoah.	.08							.18		.05										.04			.05	T.		.47				.02	.40	1.29
Warsaw	Rappahannock.		.02						.18	.05				T.												.02	.02						0.29
Woodstock	Shenandoah.		.68																		.23				.26						.05	.48	1.70

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.

‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for May, 1911. District No. 1, North Atlantic States.*

Date.	Maine.												Concord, N. H.		Massachusetts.								Providence, R. I.		Connecticut.			
	Eastport.		Greenville.		Orono.		Portland.		Presque Isle.		Rumford Falls.				Amherst.		Boston.		Middleboro.		Nantucket.				Cream Hill.		Hartford.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	48	42	56	48	75	47	53	46	67	43	70	50	72	54	68	53	73	54	58	51	52	48	59	48	65	50	71	54
2	53	40	57	46	69	46	66	39	76	48	66	38	62	40	58	37	68	43	72	51	59	39	69	38	53	34	64	40
3	40	30	37	29	64	32	44	32	59	33	40	32	45	33	45	32	47	37	49	35	46	37	48	35	45	26	48	35
4	45	28	40	26	50	26	50	27	43	27	46	31	50	30	54	27	54	33	55	29	47	36	54	33	54	27	56	32
5	56	31	60	28	65	26	59	34	67	22	62	27	64	26	66	28	66	40	64	26	57	39	62	38	60	32	64	36
6	62	38	69	36	72	30	65	39	70	29	68	33	73	31	74	32	68	46	70	30	60	39	64	42	69	42	72	43
7	74	39	69	44	76	36	80	42	74	40	76	36	80	34	80	38	81	50	79	37	70	43	79	50	75	45	78	47
8	75	47	80	42	82	35	75	53	84	40	81	44	84	41	82	44	81	58	81	39	67	46	75	52	77	54	82	50
9	56	41	77	44	81	47	68	47	74	40	75	52	77	52	66	48	71	51	64	51	63	47	62	52	62	48	62	53
10	60	40	65	44	72	46	75	46	65	52	72	47	76	52	80	40	73	57	76	48	62	48	79	54	75	46	78	47
11	48	38	65	31	73	31	60	48	68	32	75	44	92	50	89	58	85	56	68	51	62	49	79	54	83	52	82	60
12	55	43	82	45	83	42	74	55	84	42	84	49	89	61	87	60	82	61	69	60	58	50	69	53	81	60	81	61
13	76	42	71	53	78	52	76	51	68	45	73	48	72	47	72	50	80	57	83	54	74	49	82	55	69	56	74	56
14	61	41	68	47	72	34	59	46	68	26	72	36	71	38	74	40	57	50	69	40	55	42	68	48	72	45	74	46
15	57	38	68	31	73	35	57	43	70	36	73	40	76	41	74	45	73	48	68	33	58	40	65	44	71	54	70	44
16	61	48	65	48	70	49	73	56	63	40	72	53	74	50	78	54	75	59	74	52	66	50	75	57	70	53	79	55
17	73	41	72	37	76	51	70	48	72	32	76	39	80	39	82	50	71	58	76	48	67	50	71	54	76	51	79	56
18	69	45	75	46	78	45	76	53	79	45	74	52	81	57	85	54	82	56	83	48	65	50	83	53	82	55	85	55
19	58	44	70	44	77	38	53	46	74	45	70	49	68	51	81	61	64	51	77	54	65	49	75	54	83	62	83	62
20	56	45	78	48	77	47	64	46	85	54	81	54	80	51	80	59	67	50	80	50	68	51	77	53	80	58	79	60
21	63	46	90	55	83	55	73	54	94	54	89	59	91	60	87	68	87	65	81	61	70	55	73	60	83	60	84	65
22	63	47	88	59	96	56	91	58	86	62	97	63	98	62	94	66	92	68	91	64	70	56	85	65	92	64	93	63
23	56	45	72	53	87	53	68	50	76	53	70	54	74	50	71	53	78	51	75	51	60	47	73	50	71	54	72	54
24	50	42	64	45	63	46	50	47	72	49	64	51	56	49	56	51	56	50	65	48	56	45	61	50	66	50	57	50
25	53	42	69	46	68	45	54	48	.....	.....	70	51	69	49	74	54	63	51	65	51	55	48	69	52	74	55	72	54
26	62	44	73	51	74	48	61	49	.....	.....	72	55	72	55	73	50	64	51	61	51	55	49	65	52	77	58	70	54
27	66	46	80	48	81	49	70	49	86	48	83	56	82	55	84	52	69	51	74	48	61	49	77	52	80	59	81	55
28	74	49	90	50	87	53	76	54	91	63	91	54	92	52	86	52	86	58	82	41	72	49	74	52	85	62	83	54
29	63	46	86	62	89	59	80	59	86	54	92	62	92	62	86	59	88	62	80	55	66	52	83	57	81	63	83	58
30	68	54	68	46	76	51	72	53	70	42	76	52	79	54	82	62	70	60	74	61	67	52	73	60	74	57	78	62
31	55	46	69	37	77	40	60	50	70	31	72	45	74	50	73	54	64	55	67	48	64	51	66	56	66	49	68	57
Mns.	59.9	42.2	70.1	44.2	75.6	42.9	66.2	47.4	73.8[b]	42.3[b]	73.6	47.0	75.6	47.6	75.5	49.4	72.1	52.8	71.9	47.3	61.8	46.9	70.8	50.7	72.6	51.0	74.3	52.2

Date.	New Haven, Conn.		New York.										New York.		Pennsylvania.										Atlantic City, N. J.	
			Addison.		Albany.		Binghamton.		Indian Lake.		Little Falls.				Everett.		Harrisburg.		Philadelphia.		Scranton.		State College.		Wellsboro.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	66	51	76	59	72	60	75	58	60	42	75	58	69	54	81	61	81	62	82	61	79	58	77	61	77	59	60	51
2	64	42	64	35	63	37	58	32	59	30	71	32	67	40	69	38	65	41	70	43	64	36	64	34	62	35	65	44
3	50	35	46	27	43	33	42	28	53	24	37	27	52	36	50	35	54	38	57	40	47	33	48	31	47	28	57	38
4	58	33	59	24	55	31	53	27	45	23	50	28	54	39	57	27	61	41	61	44	56	35	55	33	57	22	52	41
5	64	38	66	26	64	33	58	29	59	20	60	30	60	44	60	26	64	42	64	46	60	33	60	32	62	23	54	44
6	69	41	76	28	73	37	68	34	68	23	68	36	67	46	69	30	70	42	70	49	69	37	69	37	71	28	61	45
7	79	46	77	32	78	42	73	37	72	31	72	42	76	52	75	33	76	48	76	51	74	42	75	41	75	30	67	49
8	78	52	83	34	82	45	81	39	80	30	83	46	71	53	74	53	74	52	70	54	79	47	74	47	77	32	56	50
9	64	51	77	49	70	58	73	54	82	35	73	50	63	50	71	48	74	52	70	50	74	54	74	53	76	49	57	48
10	82	52	82	42	79	54	80	48	74	34	77	45	81	62	83	48	83	58	83	59	81	56	79	55	79	40	77	55
11	74	57	93	53	90	58	88	60	85	46	88	58	80	63	91	49	91	59	90	63	90	60	89	55	85	55	63	54
12	67	57	85	53	89	62	82	58	84	59	78	60	80	66	88	51	87	65	89	69	86	65	84	59	82	50	62	53
13	81	57	69	54	71	51	61	44	67	42	68	46	80	59	79	52	77	58	82	61	86	58	73	51	70	42	78	59
14	69	50	79	33	74	45	75	37	79	26	70	36	68	53	74	39	74	50	73	55	78	43	73	39	76	31	60	52
15	65	44	87	54	77	53	80	55	79	42	78	53	66	52	83	50	77	52	72	51	79	53	82	56	81	47	59	50
16	78	54	77	58	75	60	72	56	78	53	73	57	77	58	87	53	87	62	82	59	75	63	81	53	74	56	80	55
17	70	57	78	53	80	53	69	52	80	33	80	47	66	54	87	55	80	66	75	63	71	57	82	60	79	55	63	56
18	77	56	91	55	87	63	88	59	81	54	82	59	83	56	88	54	89	64	89	62	87	57	86	61	87	54	69	56
19	78	58	94	56	83	65	88	60	78	51	86	59	77	61	94	55	94	64	91	68	89	60	88	61	88	54	84	60
20	69	58	92	61	81	62	87	67	86	50	83	57	72	58	91	57	86	66	76	61	90	65	87	61	90	60	66	57
21	76	60	96	60	88	69	92	65	94	52	90	63	78	60	92	56	88	64	89	61	92	63	90	65	92	57	68	58
22	85	60	98	60	97	69	94	62	95	59	95	77	84	61	93	71	91	69	92	64	93	66	91	63	95	57	65	57
23	78	53	91	61	82	56	92	64	86	52	86	65	82	55	91	60	92	65	94	55	93	61	89	66	91	58	78	55
24	57	51	82	62	64	56	74	60	73	53	67	53	63	53	81	61	76	59	70	55	77	59	78	62	81	63	62	55
25	71	53	77	56	70	58	65	54	70	51	62	52	74	54	80	52	80	64	80	57	68	57	79	55	76	57	68	54
26	70	55	82	49	78	56	78	51	77	43	77	49	73	57	82	49	79	57	78	60	79	53	80	52	83	49	64	56
27	74	55	89	51	84	59	84	55	85	46	85	55	75	59	83	50	82	62	80	62	83	58	83	54	84	47	64	58
28	77	53	96	52	91	61	92	55	95	45	90	57	78	59	89	50	88	61	86	61	90	57	89	55	92	50	68	54
29	77	58	91	58	91	67	86	62	90	59	80	65	79	60	93	65	89	64	85	61	90	62	89	62	89	55	68	57
30	76	60	84	53	79	64	80	59	86	44	79	57	80	65	83	56	86	66	85	67	81	65	81	55	86	53	77	62
31	64	57	84	56	76	59	75	60	80	39	72	54	66	60	79	60	74	61	76	62	73	60	78	59	84	50	68	62
Mns.	71.2	51.7	81.3	48.5	76.9	54.1	76.2	51.0	76.8	41.6	75.3	50.7	72.3	54.8	80.5	49.8	79.6	57.2	78.6	57.2	77.8	53.7	78.3	52.5	79.0	46.6	65.8	53.1

TABLE 3.—*Maximum and minimum temperatures for May, 1911. District No. 1*—Continued.

Date.	New Jersey.								Martinsburg,§ W. Va.		Maryland.								Millsboro, Del.		Washington, D. C.		Virginia.					
	Bridgeton.		Hightstown.		Phillipsburg.		Sussex.				Baltimore.		Darlington.		Frederick.		Westernport.						Culpeper.		Fredericksburg.		Staunton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max. §§	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	86	58	84	58	79	61	77	.....	86	57	85	61	82	61	86	60	80	54	87	61	86	62	83	62	86	64	81	60
2....	75	51	70	50	64	41	69	42	59	52	68	44	76	48	77	47	75	41	75	49	68	43	77	53	79	52	61	50
3....	62	33	57	33	55	35	50	31	59	39	58	41	58	32	59	36	57	34	62	35	60	40	63	33	66	32	62	31
4....	65	35	61	30	60	32	58	26	65	36	64	45	63	32	65	36	59	30	61	39	64	43	66	44	67	45	66	41
5....	70	40	66	34	65	35	65	29	72	36	65	47	65	41	66	36	65	29	67	34	65	44	66	44	69	44	66	38
6....	75	35	72	36	73	36	73	32	78	36	68	44	71	37	71	34	71	30	71	35	72	37	71	34	73	37	71	34
7....	77	42	80	39	80	40	78	36	81	36	75	49	76	43	76	38	79	35	73	33	76	42	75	37	75	41	76	37
8....	67	46	76	44	79	47	78	41	72	48	66	55	67	50	71	48	74	43	58	48	66	53	67	52	63	51	63	49
9....	72	48	69	50	71	47	74	45	78	48	75	52	74	48	79	48	73	54	65	41	77	49	77	44	79	48	74	50
10....	86	51	85	50	83	55	84	53	89	54	85	61	85	54	86	58	90	50	80	53	85	61	88	51	89	53	85	52
11....	94	56	92	57	93	60	90	59	94	55	91	62	88	59	93	55	95	50	91	60	94	62	94	59	96	58	92	51
12....	92	64	91	65	89	62	86	62	90	56	87	64	88	63	91	63	90	51	90	65	92	70	93	68	94	67	92	65
13....	87	60	83	62	77	60	77	53	85	62	85	62	83	65	84	63	91	52	84	63	83	64	87	63	87	69	84	59
14....	76	50	73	45	78	45	77	39	78	49	73	55	75	45	76	48	78	42	69	49	74	53	78	53	77	54	76	51
15....	75	43	77	37	78	44	74	39	84	49	73	53	71	46	80	47	88	47	67	44	78	48	81	45	84	46	82	46
16....	89	56	81	54	81	57	81	56	93	53	91	59	91	56	91	58	92	54	87	54	93	60	92	57	92	59	91	58
17....	81	61	76	56	74	57	75	54	88	60	81	68	82	63	87	61	92	55	75	61	89	63	92	66	91	65	92	60
18....	94	56	92	54	91	56	90	55	96	61	95	67	88	59	94	62	93	56	78	60	95	64	90	61	98	60	93	59
19....	94	65	95	60	93	61	89	58	98	64	91	70	93	59	96	64	91	57	90	67	96	67	91	62	98	63	93	62
20....	92	61	75	57	76	62	75	59	97	64	88	68	85	63	93	66	95	59	83	61	95	68	95	62	95	64	90	57
21....	90	60	86	58	90	64	91	61	95	65	85	65	86	62	91	64	94	57	85	58	93	64	95	61	94	62	92	59
22....	90	60	94	60	95	63	96	61	97	66	90	67	90	62	93	65	93	58	83	60	94	66	94	63	95	63	92	60
23....	95	60	94	58	95	59	90	64	97	66	90	64	90	65	94	66	88	60	89	59	95	68	94	62	90	63	89	64
24....	76	54	66	53	68	55	69	55	88	67	72	59	83	56	81	64	84	62	71	56	80	61	89	67	84	65	90	62
25....	85	55	80	53	77	57	73	58	87	59	83	64	81	55	85	58	86	49	80	56	85	61	89	54	86	57	90	58
26....	78	53	80	49	82	54	82	46	88	56	78	61	81	58	81	55	81	53	73	53	81	59	84	60	79	60	88	58
27....	83	54	80	55	85	56	85	50	86	57	81	62	82	56	83	58	84	55	74	51	81	58	84	56	79	55	83	56
28....	90	50	89	48	90	53	89	51	92	56	85	60	86	55	88	56	90	50	78	47	86	56	89	53	84	54	88	54
29....	86	56	90	54	92	58	90	57	95	58	84	64	83	58	90	58	91	56	83	57	89	58	90	55	84	53	90	54
30....	91	63	86	61	84	64	78	62	92	62	86	68	85	58	91	64	89	56	88	56	90	65	92	61	86	59	89	61
31....	84	64	72	59	68	60	70	57	85	64	82	66	79	57	87	66	76	55	83	63	86	67	89	64	88	67	88	60
Mns..	82.5	52.9	79.7	50.9	79.5	52.8	78.5	a49.7	85.3	54.5	80.0	59.8	80.2	53.7	83.4	54.9	83.4	49.5	77.4	52.5	82.8	57.3	84.4	55.0	84.1	55.8	82.9	53.4

a, *b*, *c*, etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT No. 2, SOUTH ATLANTIC AND EAST GULF STATES.

CHARLES F. VON HERRMANN, District Editor.

GENERAL SUMMARY.

The most important features of the weather for May, 1911, were the marked contrast in temperature conditions between the first decade and the last portion of the month, and the general drought that prevailed during most of the month in the entire district except Florida. The temperature was decidedly below normal during the first 10 days of the month, with minimum temperatures at freezing or below on the 2d or 3d in Virginia and western North Carolina. During this period the temperature in the interior of Virginia at some places fell lower than previously recorded during May. In the western portions of North and South Carolina light frosts formed at several stations on the 6th and 7th. Minimum temperatures below 40° were registered even in northern Georgia and Alabama, and conditions were unfavorable for the rapid growth of vegetation.

About May 9 a change to warmer weather took place, and during the remainder of the month the temperature was continuously above the normal, the warmth culminating in periods of intense heat about the 18th and 19th in Virginia and the Carolinas, on the 26th in the section from North Carolina to Georgia, and during the last four days of the month in the Gulf States. During these periods cloudless skies with intense sunshine prevailed, and maximum temperatures of 100° or above occurred in all sections except Virginia, where the highest was 98°. All previous records for high temperatures in May were broken at many places, especially in the Gulf States. In Georgia the highest recorded May temperatures occurred this month at over 20 stations. In Mississippi the maximum for the State, 104° at Lake Como on the 29th, is 2° higher than any temperature previously recorded in that State during May.

A general and severe drought prevailed during the month, especially in South Carolina, southeastern North Carolina, and portions of Virginia, in all of which States the average deficiency in precipitation for the month was about 3 inches. Less marked deficiencies also occurred in Georgia, except in the extreme eastern portion, where the rainfall was extremely small; in Alabama and in Mississippi, averaging about 1.40 inches for these States. At fully three-fourths of the stations in the valley of the James River in Virginia the rainfall for May was the smallest received during the past 40 years. In North Carolina the rainfall was quite uniformly distributed. South Carolina presents the unique feature that five stations in the extreme southeastern portion received no appreciable rainfall whatever during the month. The rainfall at Savannah was the least for May since the establishment of the station in 1871. The region of most severe drought extended from the coast northwest to Augusta and Columbia. The general extent of the drought in the region north of Florida is indicated by the fact that of 203 stations reporting 150 received less than 1 inch, and only 17 more than 3 inches. On the other hand, in Florida there was a moderate excess in rainfall and some large amounts were received locally, chiefly on the southeast coast.

The distribution of the atmospheric pressure during the month presents certain features that indicate a decided encroachment of the North Atlantic high-pressure area over the Southeastern States, accounting to a certain extent for the relatively few atmospheric disturbances that influenced the weather of the district during the month. Comparatively few independent areas of high pressure appeared, but each lingered over the district for many days, giving a mean pressure for the month considerably above the normal. For example, the area of high barometer that moved from the Dakotas to the Ohio Valley on the 3d lingered in the Ohio Valley until the 7th, then moved to the east Gulf States and was still evident off the South Atlantic coast on the 12th. This high-pressure area gave the highest barometer readings in the district at northern stations on the 6th and in the south on the 7th, the maximum being 30.39 inches on the 6th at Lynchburg and Richmond, Va. The remaining three areas of high pressure that appeared over the district during the month similarly controlled conditions for many successive days. On the other hand, the weather was directly affected by unusually few areas of low atmospheric pressure. A moderate disturbance was evident near Toledo, Ohio, on the 1st and passed to Maine on the 2d, giving the lowest atmospheric pressure for the month at the northern stations of the district on the 1st, with a minimum of 29.66 inches at Lynchburg. This was accompanied by moderate rains throughout the district and was followed during the 2d and 3d by marked falls in temperature. At some points in the district the lowest pressure occurred on the 14th (Key West), on the 19th (Jacksonville and Mobile), and the 31st (Augusta). The rains from the 18th to the 24th in the Gulf States were local in character, though associated with barometric depressions in the Mississippi Valley or the Lake region. The range in pressure for the district was 0.73 inch.

Thunderstorms were not frequent during May, occurring mostly during the second decade or toward the close of the month. A few severe local storms occurred in Mississippi, Georgia, and especially in North Carolina, where the resulting damage to property was quite considerable. The percentage of sunshine during the month was very high. During the middle and latter part of the month the warmth and clear skies advanced vegetation rapidly and conditions for the most part were exceptionally favorable for farm work, but toward the close of the month drought began to affect vegetation adversely and truck and fruit crops were damaged in many sections. The continuance of the drought during early June brought serious conditions in many places.

TEMPERATURE.

The temperature was above normal in all portions of the district, except Florida, the State averages showing excesses varying from 3.3° for the Virginia area to 0.8°

for Mississippi, the mean departure for the district being +1.2°. The excess would have been much greater had not the first decade been unusually cool. Florida, however, presents the anomaly of conditions with reference both to temperature and precipitation completely the reverse of those prevailing in the remainder of the district. The temperatures in Florida were below normal at all points except in that portion of the State west of the Apalachicola River and at one or two places on the immediate west coast. Several stations in the adjoining portions of Georgia, as well as in a narrow strip of the immediate coast line as far north as Wilmington, show slight deficiencies. In Florida the month was the coolest May, except two, since 1892. The greatest negative departures are found in southern Florida (Miami, −2.1°) and the greatest positive departures in the northern portion of the Virginia area (Charlottesville, +6.3°). In North Carolina the State mean temperature for the current month was the highest for May in the last 15 years.

The average temperature for the entire district computed from the records at 298 stations was 72.2°. In almost all States in the district there was a remarkable uniformity in the local monthly means, the range being very small.

The 1st day of May was moderately warm, but a rapid fall in temperature took place in the Gulf States from the 1st to 2d, amounting to from 10 to 18° at most stations in Mississippi, Alabama, and Georgia; this sudden change of temperature reached northern districts on the 3d with a fall amounting at some points to over 20°. The temperature remained generally below the normal until the 9th, during which period the minimum temperatures for the month occurred in all sections, the lowest for the district being 23° on the 2d at Hot Springs, Va. Freezing temperatures occurred at Saxon, N. C., on the 2d and at Ramseur, N. C., on the 7th, and light to heavy frosts occurred at several stations in the three northern States of the district. At some places the curious fact is presented that both the highest and lowest temperatures registered in May during many years occurred during the current month. For instance, at Richmond the minimum (38°) on the 3d is 1° lower than ever before recorded in May, and the maximum (95°) on the 18th also established a new record for high temperature at that station.

On the 9th a change to warmer weather took place and the temperature continued above normal during the remainder of the month. The latter part of May was characterized by successive periods of intensely hot weather, during which all previous records for high temperatures in May were broken at many stations. The period of greatest heat seemed to advance from north to south, occurring on the 18th and 19th in Virginia, with very high temperatures on the same dates in North Carolina; on the 26th in North and South Carolina and Georgia and during the last four days of the month in Alabama and Mississippi. In Florida the warmest days occurred on the 2d, 11th, and 27th. The intensity of the heat is shown by the unseasonably high temperatures attained everywhere, exceeding 100° in all States except Virginia.

PRECIPITATION.

May, 1911, was not only unusually warm, but it was also excessively dry in large portions of the district, and at the close of the month the drought was becoming serious, especially in the three northern States and in the eastern portion of Georgia. A deficiency in rainfall occurred in all States except Florida, where heavy local rains on the southeastern coast brought the State average slightly above normal. The average deficiency in precipitation for Virginia, North Carolina, and South Carolina was 3 inches and for Georgia, Alabama, and Mississippi about 1.40 inches. The smallest State averages were 0.95 inch for the Virginia area and 0.65 inch for South Carolina. With respect to precipitation also many records of considerable length for May were broken, and the following items of interest pertaining to each State are given:

Virginia.—The small amounts of rain received made the month the most unseasonable in the climatic history of the State. At Lynchburg the total rainfall for the month was 0.66 inch, the least on record since 1872. At Richmond a series of very light showers occurred on the 8th and no other precipitation of consequence until the evening of the 31st, and the total for the month, 0.60 inch, is the smallest for May during the last 40 years. The driest May previously experienced was that of 1881, when, however, nearly twice as much rain fell as during the current month. Over fully three-fourths of the valley of the James River the rainfall for May, 1911, was the smallest received during the past 40 years. Out of 26 stations reporting 20 received less than 1 inch.

North Carolina.—The State average, 1.21 inches, is much less than any previous average for May, the next lowest record being 1.99 inches, for May, 1903. A severe drought is reported in the southeastern counties owing to a marked deficiency in precipitation for several months and the light rainfall during the present month. But in the interior counties the rainfall was well distributed; of 60 stations reporting 30 received between 1 and 2 inches and 24 less than 1 inch. Crops in the central and north-central counties are in good condition, the light rainfall having been sufficient for the season.

South Carolina.—The drought of preceding months continued and became intense, especially along the coast. At the regular Weather Bureau stations at Wilmington, N. C., Charleston, S. C., and Savannah, Ga., it was the driest May in 41 years. At Augusta, which also has a record for over 40 years, May has been drier only twice before, in 1898 and 1844. At Columbia, S. C., a moderately heavy rain during the last few hours of the month prevented the breaking of the record for dryness, and the month stands as the second driest. However, the record for number of successive days without precipitation was broken for the early summer season—April to June—by the record of 23 days without rain, from the 1st to the 23d, inclusive. If the records at Charleston prior to the establishment of the regular Weather Bureau station in 1871 are taken into consideration, it is found that at that place the current month is the driest May since 1787, bearing in mind the fact that 35 years are missing during this period of 125 years.

Georgia.—The average precipitation for May, 1911, is the smallest on record for the month since 1900. The precipitation was least in the lower portion of the Savannah River Basin, but crops at the close of the month were not yet seriously suffering for lack of moisture. Out of 72 stations reporting 69 received over 1 inch and only 13 less than 1 inch. May during the three successive years 1897, 1898, and 1899 was much drier.

In Alabama and Mississippi the State averages were somewhat higher, namely, 2.91 and 2.54 inches, respectively, and the distribution of precipitation was more uniform.

The region of least rainfall is found in eastern South Carolina, where no appreciable rainfall occurred at Beaufort, Georgetown, Jacksonboro, St. George, and Yemassee. The region of maximum rainfall is found on the southeastern coast of Florida, where locally the amounts were large. Miami received 12.12 inches and Hypoluxo 10.30 inches, mostly in the form of heavy showers on the 4th and during the period from the 14th to 19th. Another region of heavy rains is found in the central portion of the upper peninsula of Florida, extending from Homestead, with 8.50 inches, north to Live Oak, with 9.29 inches.

Very light showers were general over most of the district on the 1st and 2d, except in Florida, followed by a period of fair weather of about 10 days duration, except in Virginia and North Carolina, where it was interrupted by light showers on the 8th and 9th. Another period of light rains occurred from the 13th to 14th in the section from North Carolina to Florida, lasting in the latter State from the 14th to the 24th. During the remainder of May the rainfall was very irregular, occurring at

widely separated stations on scattered dates from the 23d to the 31st. The average number of days with appreciable precipitation for the district was but 5, ranging from 3 in South Carolina to 9 in Florida.

RIVER CONDITIONS.

The stages of the rivers remained very low throughout the month, the means being below the normal at almost all the river stations. The Yadkin and Cape Fear Rivers in North Carolina were as low as ever before recorded in May. At almost every river station in South Carolina and Georgia the stages were much below the average for May. The rivers of Alabama and Mississippi did not show quite so marked a decline.

MISCELLANEOUS PHENOMENA.

The prevailing winds for the month were from the southwest in Virginia and North Carolina, from the northeast in South Carolina, Georgia, and Florida, and from the east or southeast in Alabama and Mississippi. The wind movement was moderate, but exceeded an average of 10 miles an hour for the month at Cape Henry, Va., Hatteras, N. C., Charleston, S. C., Savannah, Ga., and Pensacola, Fla. The maximum wind velocities reported were Hatteras, 48 miles from the northwest on the 8th; Raleigh, 41 miles from the northeast on the 26th, and Charlotte, 40 miles from the southwest on the 1st. The percentage of sunshine was very high, the average number of clear days being 20 and of cloudy days but 4.

SEVERE LOCAL STORMS.

North Carolina.—Heavy thunderstorms were observed at many stations in central and eastern North Carolina from 5 to 7 p. m. on the 26th, high winds being reported at Durham, Louisburg, Raleigh, Chalybeate Springs, Fayetteville, Lumberton, and Whiteville. The wind reached a velocity of 41 miles an hour from the northeast at 7 p. m. in Raleigh. As a result of lightning and high winds St. Agnes Hospital, Raleigh, was seriously damaged. The Venable tobacco warehouse and Chatham hosiery mills at Durham, N. C., were destroyed; also a large tobacco warehouse and church at Apex, and a store and dwelling at Whiteville. Many trees were uprooted. Aside from the damage to timber the loss is estimated at over $100,000.

South Carolina.—Damaging hailstorms occurred in the extreme northwest portion of South Carolina on the 13th, while sandstorms did considerable damage at places in the northeastern portion on the night of the 26th.

Mississippi.—A severe wind storm, accompanied by heavy rain, occurred at Jackson on the afternoon of the 30th, injuring telegraph wires and poles and damaging shade trees. The only other damage of importance occurred at the store of the McClelland Hardware Co., where a glass front was blown out. The total money loss is estimated at about $500.

THE DROUGHT OF 1910-11 IN SOUTH CAROLINA.

By HARRY O. GEREN, Section Director, Columbia, S. C.

The drought of November, 1910, to May, 1911, inclusive, stands almost unparalleled in the meteorological history of South Carolina. The records of cooperative observers are much too short to determine its relative importance as compared with others that may have occurred, and it is found that even the records of the regular Weather Bureau stations in and near the State are also too brief, although most of them have been in operation for over 40 years. The Charleston record of 119 years was found to give a more accurate idea of the extreme severity of this dry period.

The regular Weather Bureau stations at Wilmington and Charlotte, N. C., Charleston and Columbia, S. C., and Augusta and Savannah, Ga., are so situated that their records give a fair average precipitation for the State as a whole. An examination of these records shows that the past seven months given in the table below have been the driest of any similar period during the last 41 years, except possibly in the extreme northwest and southern portions, the combined areas of which do not aggregate 10 per cent of the total area of the State.

Stations.	1910		1911					Total.	Normal.	Per cent.
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.			
Wilmington, N. C.	0.92	1.30	2.03	0.45	3.95	0.70	0.28	9.63	22.94	42
Charleston, S. C.	1.61	1.21	0.56	1.11	1.27	1.74	0.13	7.63	23.06	33
Savannah, Ga.	2.74	1.56	1.03	0.70	1.35	2.69	0.13	10.20	21.52	47
Charlotte, N. C.	0.36	2.53	1.93	1.93	2.77	2.66	1.23	13.41	27.33	49
Columbia, S. C.	0.59	1.30	1.52	0.94	1.15	1.84	0.70	8.04	22.76	35
Augusta, Ga.	1.35	1.64	1.51	1.24	2.13	2.31	0.79	10.97	26.46	41
Average	1.26	1.59	1.43	1.06	2.10	1.99	0.54	9.98	24.01	42

The only record of considerable length prior to 1871 is that at Charleston. It covers the years 1738–1765, 1785–1791, 1807–1811, and 1832 to date, a total of 119 years out of the past 173. An examination of this record shows but one period of any successive seven months with less precipitation than the period under discussion. It extended from October, 1757, to April, 1758, inclusive, the total precipitation for the seven months being only 4.95 inches as compared with 7.63 inches from November, 1910, to May, 1911. The record in 1757–58 at Charleston was as follows: October, 0.46 inch; November, 0.64; December, 0.84; January, 0.53; February, 0.53; March, 1.76, and April, 0.19. The precipitation during the three months preceding that drought amounted to 111 per cent of the normal; in the case of the present one it was 126 per cent. It is of course not probable that the present low rate of rainfall at Charleston (33 per cent) will continue during the remainder of the year. The occurrence of a similar drought so long ago as 1757–58 refutes the idea of a possible permanent change in the rainfall for this section.

Average precipitation during drought, in terms of percentage of normal.

	1910		1911				
	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.
Coast stations	70	44	36	22	60	57	5
Interior stations	28	52	43	31	45	69	26

Coast stations comprise Wilmington, Charleston, and Savannah; interior stations, Charlotte, Columbia, and Augusta.

TABLE 1.—*Climatological data for May, 1911. District No. 2, South Atlantic and east Gulf States.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall (unmelted).	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Virginia.																				
Arvonia	Buckingham	350	7	69.2	+ 3.6	96	18	34	3	39	0.67	− 3.09	0.30	0	5	16	14	1	sw.	Rev. Plummer F. Jones.
Ashland	Hanover	221	20	69.0	+ 3.2	93	19	35	3	32	0.49	− 3.80	0.36	0	4	5	25	1	s.	E. L. C. Scott.
Buchanan	Botetourt	820	7								1.17	− 2.96	0.55	0	6	23	1	7	w.	D. D. Booze.
Callaville	Brunswick	250	17								0.97	− 3.02	0.85	0	2					F. M. Gage.
Cape Henry	Princess Anne	20	37	67.1	+ 2.9	95	19	47	4	28	0.62	− 3.41	0.57	0	4	15	13	3	sw.	U. S. Weather Bureau.
Catawba	Roanoke	1,760	1	66.6		91	12	32	3	34	2.04		1.18	0	6	19	11	1	w.	State Bd. of Health Sanit'm.
Charlottesville	Albemarle	800	22	72.2	+ 6.3	96	19	37	3	33	0.98	− 3.54	0.95	0	2	16	11	4	s.	Leander McCormick Observ.
Clarksville	Mecklenburg		17								1.15	− 3.28	0.55	0	2					J. A. Ligon.
Columbia	Fluvanna	246	13	67.6	+ 0.9	96	18	31	3	40	0.70	− 3.40	0.34	0	4	23	4	4	ne.	Chesapeake & Ohio Ry.
Covesville	Albemarle	350	1	68.8		94	18	32	3	35	0.44		0.34	0	2					E. F. Cole.
Danville	Pittsylvania	413	11								0.98	− 3.06	0.41	0	7					C. G. Watkins.
Diamond Springs	Princess Anne	20	1	69.1		96	19	41	4†	30	0.70		0.63	0	3	20	6	5		Virginia Truck Exp. Station.
Hampton	Elizabeth City	5	28	69.1	+ 3.2	92	19	42	3	28	0.77	− 3.04	0.58	0	3	23	6	2	sw.	Normal and Agr. Institute.
Hot Springs	Bath	2,195	19	62.8	+ 3.0	94	10†	23	2	48	2.40	− 1.61	1.25	0	9	23	4	4		F. M. Terry.
Lassiter	Goochland	100	1								0.44		0.29	0	3	28	2	1		T. J. Davis.
Lexington	Rockbridge	1,080	34	67.2	+ 4.3	94	26	30	3	44	0.75	− 2.99	0.41	0	6	24	5	2		Virginia Military Institute.
Lynchburg	Campbell	685	40	69.2	+ 3.3	93	18	35	3	39	0.66	− 3.33	0.37	0	7	16	14	1	n.	U. S. Weather Bureau.
Newcastle	Craig	1,300	2								0.93		0.35	0	6			6		Miss J. L. Martin.
Newport News	Warwick	55	8	69.7		94	19	42	3	26	0.63		0.47	0	5	17	10	4	se.	C. W. Ashby.
Norfolk	Norfolk	91	41	69.2	+ 3.1	94	19	48	3	26	0.56	− 3.51	0.54	0	3	14	14	3	s.	U. S. Weather Bureau.
Petersburg	Dinwiddie	60	24	71.8	+ 4.9	95	19	37	3	32	1.57	− 3.04	0.67	0	3	25	3	3	e.	Central State Hospital.
Richmond	Henrico	144	32	69.8	+ 2.5	95	18	38	3	31	0.60	− 3.25	0.35	0	5	13	14	4	se.	U. S. Weather Bureau.
Rocky Mount	Franklin	1,150	17	68.2	+ 2.8	95	17	29	3	43	0.78	− 3.28	0.25	0	6	21	0	10	ne.	G. W. B. Hale.
Saxe	Charlotte	350	8	68.6		94	17†	33	3	39	0.96		0.52	0	5	24	2	5	sw.	State Experiment Farm.
Spottsville (near)	Surry	15	23	69.2	+ 3.4	95	20	36	3	40	2.14	− 2.04	1.12	0	4	17	10	4	sw.	B. W. Jones.
Williamsburg	James City	70	20	69.0	+ 3.6	95	19	36	3	34	0.65	− 3.16	0.20	0	4	23	4	4	sw.	Eastern State Hospital.
North Carolina.																				
Beaufort	Carteret	10	10	70.2	+ 0.6	92	26	49	8	26	1.26	− 2.48	0.33	0	7	24	3	4	s.	H. D. Aller.
Belhaven	Beaufort	4	2	70.2		96	18	39	4	33	1.35		0.73	0	4	20	6	5	s.	W. S. Hopkins.
Caroleen	Rutherford	806	11	70.3	+ 1.5	97	26	39	7	40	0.39	− 3.44	0.18	0	4	20	7	4	sw.	S. B. Tanner.
Chalybeate Springs	Harnett	500	5	67.4		95	18	34	7	45	2.63		1.68	0	5	24	6	1	ne.	J. A. Smith.
Chapel Hill	Orange	500	53	70.8	+ 2.8	97	26	39	3†	38	2.37	− 2.15	0.83	0	5	22	8	1	sw.	Prof. A. H. Patterson.
Charlotte	Mecklenburg	773	35	71.0	+ 2.6	95	26	44	6	32	1.23	− 2.69	0.47	0	6	20	6	5	ne.	U. S. Weather Bureau.
Chimney Rock	Rutherford	1,150	1	69.2		92	12†	40	8	36	1.30		0.98	0	2	22	8	1	w.	J. M. Flack.
Durham (near)	Durham	406	2								1.67		0.78	0	3					J. H. Michie.
Eagletown	Northampton	66	6	69.9		94	18	41	4	36	1.41		0.80	0	5	20	9	2	sw.	J. T. Elliott.
Edenton	Chowan	30	17	68.6	+ 0.3	90	18	35	8	35	0.90	− 4.04	0.60	0	2	17	10	4	s.	E. R. Conger.
Elizabethtown	Bladen	60									0.27		0.27	0	1					J. W. Hall, jr.
Enfield (near)	Halifax	99									0.77		0.35	0	4					T. S. Inborden.
Fayetteville	Cumberland	170	24	72.2	+ 2.1	98	26	42	7	38	0.66	− 3.63	0.48	0	5	19	7	5	s.	Frank Glover.
Goldsboro	Wayne	102	41	69.8	+ 0.3	94	18	43	4†	35	0.57	− 3.96	0.30	0	5				s.	Mrs. N. B. Taylor.
Graham	Alamance	656	9								1.63		0.52	0	7					Dr. W. R. Goley.
Greensboro	Guilford	843	30	70.8	+ 2.6	100	26	38	3	39	1.73	− 2.66	0.77	0	6				sw.	A. H. Horry.
Greenville	Pitt	75	18								1.54	− 2.45	0.60	0	9					R. M. Hearne.
Hatteras	Dare	11	37	68.0	+ 0.9	83	26	50	8	19	0.70	− 3.44	0.49	0	6	20	6	5	sw.	U. S. Weather Bureau.
Henderson	Vance	508	18	69.4	+ 1.5	91	17†	40	3	27	2.94	− 1.14	1.55	0	4	21	9	1	ne.	Enoch Powell.
Kings Mountain (near)	Gaston	952		72.3		99	26	35	7	40	0.50		0.38	0	5	12	15	4	w.	Rev. C. J. Strang.
Kinston	Lenoir	46	13	72.0	+ 2.0	98	18	42	4	39	1.60	− 2.53	0.56	0	4	22	4	5	ne.	H. C. V. Peebles.
Lenoir	Caldwell	1,186	38	67.2	+ 2.4	95	11†	33	6†	47	1.67	− 2.94	0.62	0	6	27	2	2	s.	G. M. Goforth.
Lincolnton	Lincoln	994	6	68.0		97	26	34	6†	42	1.21		0.45	0	6	8	22	1	sw.	S. P. Houser.
Louisburg	Franklin	375	20	71.1	+ 3.2	92	26	42	4	37	1.13	− 3.09	0.40	0	6	22	8	1	s.	T. B. Wilder.
Lumberton	Robeson	102	28	72.3	+ 1.5	100	26	43	4†	43	0.40	− 3.74	0.37	0	4				sw.	B. M. Davis.
Manteo	Dare	12	6	68.0		89	19	45	4	26	0.76		0.76	0	1	17	7	7	ne.	U. S. Weather Bureau.
Marion	McDowell	1,425	19	67.8	+ 2.9	97	26	35	6	42	1.82	− 3.04	0.59	0	7	18	12	1	w.	Sergt. Thos. McGuire.
Middletown	Hyde	4		68.1		86	18†	48	3	30	1.20		0.76	0	5	17	10	4		J. S. Mann.
Moncure	Chatham	145	17	69.4	+ 0.6	98	26	33	7	46	1.33	− 2.45	0.67	0	6	20	3	8	sw.	B. J. Utley.
Monroe	Union	586	17	70.2	+ 1.9	99	26	33	7	42	0.64	− 2.98	0.39	0	3	26	2	3	ne.	T. A. Ashcraft.
Morganton	Burke	1,135	24	68.0	+ 1.6	95	26	35	6	40	1.30	− 2.28	0.59	0	5	25	5	1	ne.	H. D. Judd.
Mount Airy	Surry	1,048	23	67.3	+ 2.7	98	26	33	6	46	1.53	− 2.00	1.37	0	4	25	4	2	se.	Prof. A. H. Merritt.
Mount Holly	Gaston	616	14								0.64	− 4.33	0.30	0	5					J. W. Holland.
Nashville	Nash	190	7	71.0		95	17†	40	4	35	1.25		0.42	0	6	14	12	5	e.	J. B. Boddie.
Newbern	Craven	12	29	69.2	0.0	93	18	44	8	39	1.44	− 3.32	0.64	0	7				sw.	J. B. Hill.
Pinehurst	Moore	650	7	71.4		96	26	41	7	33	1.32		0.60	0	7	28	0	3	s.	General Office.
Pittsboro	Chatham	480	20	70.0	+ 3.2	96	12	34	6	42	1.15	− 3.49	0.60	0	4	28	1	2		B. M. Poe.
Raleigh	Wake	390	40	70.4	+ 2.3	92	26	43	4	30	2.10	− 2.79	0.68	0	5	19	9	3	sw.	U. S. Weather Bureau.
Ramseur	Randolph	442	4	70.0		101	26	32	7	50	0.76		0.40	0	7	18	13	0	sw.	A. H. York.
Randleman	do	810	6								2.74		1.90	0	6					J. R. Walton.
Reidsville	Rockingham	828	12	70.4	+ 3.9	96	18	38	3	37	1.00	− 2.94	0.32	0	8	22	4	5	sw.	E. M. Redd.
Rock House	Macon	3,100	19	63.5	+ 0.3	85	26	38	3	24	2.91	− 2.15	0.84	0	10	18	11	2	n.	Barry C. Hawkins.
Rockingham	Richmond	210	16	72.2	+ 1.1	99	26	40	6	37	1.38	− 2.49	0.60	0	5					H. S. Ledbetter.
Rocky Mount	Nash	105									0.95		0.88	0	3					G. P. Womble.
Roxboro	Person	600	12	70.4	+ 3.4	95	11	37	2	38	2.52	− 2.55	1.20	0	5	24	1	6	s.	N. Lunsford.
Salem	Forsyth	1,000	16	68.0	+ 0.1	96	26	36	6†	38	1.36	− 2.27	0.95	0	4					Rev. H. E. Rondthaler.
Salisbury	Rowan	760	27	71.6	+ 2.5	99	26	40	6	38	1.29	− 3.03	0.68	0	6	20	2	9	w.	Miss Thelma Wilkinson.
Saxon	Stokes	900	19	68.0	+ 1.8	97	26	32	3	40	1.14	− 3.07	0.47	0	5	24	4	3	sw.	R. P. McAnally.
Scotland Neck	Halifax	80	7	68.1		91	18	39	4	35	0.77		0.43	0	3	14	8	9	sw.	J. Y. Savage.
Selma	Johnston	225	21	71.0	+ 2.1	97	26	41	4	39	1.20	− 3.28	0.55	0	3					Dr. R. J. Noble.
Settle	Iredell	700	15	68.5	+ 0.9	98	26	35	7	41	0.73	− 2.63	0.50	0	2	20	5	6	sw.	C. H. Smith.
Sloan	Duplin	50	18	70.4	+ 1.0	95	26	45	9	42	0.54	− 4.21	0.30	0	4	19	4	8	s.	D. M. Sholar.
Snow Hill	Greene	80	6	70.7		96	18†	39	4	41	0.48		0.33	0	4	12	15	4	s.	L. J. H. Mewborn.
Southern Pines	Moore	519	21	71.8	+ 0.8	98	26	42	7†	36	2.17	− 2.24	1.25	0	5	23	5	3	sw.	Mrs. P. H. Beck.
Southport	Brunswick	18	56	70.3	− 0.8	92	26	49	6†	32	0.94	− 2.44	0.55	0	5	21	3	7	sw.	Mrs. J. S. Taylor.
Statesville	Iredell	950	23	68.7	+ 2.9	94	18†	37	6†	39	1.40	− 2.56	1.10	0	2	18	11	2	sw.	D. Matt Thompson.
Tarboro	Edgecombe	50	26	72.4	+ 3.0	97	18†	41	4	41	0.52	− 4.72	0.33	0	4	21	4	6	sw.	E. V. Zoeller.
Weldon	Halifax	81	39	71.8	+ 3.7	98	18†	43	3†	37	0.68	− 3.63	0.44	0	3				n.	H. S. S. Cooper.
Whiteville	Columbus	59	6	68.6		98	26	36	6	43	0.50		0.41	0	4	26	1	4	ne.	J. R. Williamson.
Willard	Pender	51	3	71.0[a]		96	26	45	8	43	0.71		0.25	0	5	26	2	3	s.	J. H. Jefferies.
Wilmington	New Hanover	52	40	70.2	+ 1.1	93	26	48	7	30	0.28	− 3.75	0.14	0	6	13	13	5	sw.	U. S. Weather Bureau.
South Carolina.																				
Aiken	Aiken	565	27	74.2	+ 1.9	99	26	47	6	40	0.75	− 2.51	0.75	0	1	28	3	0	w.	Dr. H. T. Hall.
Allendale	Barnwell	186	23	73.3	+ 0.3	98	11†	45	7†	42	0.20	− 3.35	0.20	0	1	13	13	5		A. R. Hiers.
Anderson	Anderson	764	10	69.0[b]	− 0.8	98	26	43[b]	7	47	2.41	− 1.55	1.70	0	5	20	0	11	e.	H. H. Russell.
Batesburg	Lexington	656	23	73.2	+ 1.6	97	26†	42	7	33	0.58	− 3.13	0.42	0	3	18	7	6	n.	E. J. Hite.

TABLE 1.—*Climatological data for May, 1911. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
South Carolina—Contd.																				
Beaufort	Beaufort	20	25	72.0	− 1.9	93	26	49	8	27	T.	− 3.33	T.	0	0	15	15	1	se.	Miss Lillian H. Rice.
Blackville	Barnwell	296	22	74.8	+ 1.4	101	25	45	6	42	0.28	− 3.55	0.08	0	5	15	9	7	ne.	Miss M. E. Lange.
Blairs	Fairfield	293	6	.....	.....	.....	.....	.....	.....	.....	0.54	.....	0.34	0	3	16	8	7	s.	John R. Ragsdale.
Bowman	Orangeburg	160	10	72.4	0.0	99	26	44	8	43	1.43	− 2.19	0.96	0	4	28	2	1	e.	B. O. Evans.
Calhoun Falls	Abbeville	508	18	.....	.....	.....	.....	.....	.....	.....	0.84	− 2.66	0.34	0	4	22	4	5	s.	L. M. Parker.
Camden	Kershaw	222	45	71.0	.....	103	27	35	6	52	0.06	− 3.24	0.06	0	1	23	7	1	ne.	W. C. Brown.
Catawba	York	562	6	.....	.....	.....	.....	.....	.....	.....	0.77	.....	0.28	0	4	20	7	4	s.	James C. Faris.
Chappells	Newberry	402	6	.....	.....	.....	.....	.....	.....	.....	0.06	.....	0.06	0	1	25	0	6	w.	W. R. Zimmerman.
Charleston	Charleston	48	41	72.2	− 0.2	93	26	50	8	26	0.13	− 3.34	0.13	0	2	19	11	1	ne.	U. S. Weather Bureau.
Cheraw	Chesterfield	144	23	71.3[b]	+ 0.7	97	26	41[e]	7	37	0.25	− 3.62	0.12	0	7	21	8	2	e.	J. H. Powe.
Clemson College	Oconee	850	20	69.0	− 0.5	88	31	43	6†	30	1.78	− 1.44	0.68	0	5	24	6	1	w.	Prof. John N. Hook.
Columbia	Richland	351	24	72.8	+ 1.0	99	26	43	7	33	0.70	− 2.49	0.65	0	2	16	11	4	s.	U. S. Weather Bureau
Conway	Horry	25	19	71.6	+ 1.1	99	26	43	8	41	0.48	− 3.04	0.35	0	3	17	0	14	s.	P. C. Quattlebaum.
Darlington	Darlington	175	16	71.2	.....	103	26	39	7	47	0.34	− 3.31	0.21	0	3	.....	.....	.....	.....	D. C. McCall.
Dillon	Dillon	100	7	72.8	+ 1.4	102[a]	26	42	7	45	0.29	− 3.45	0.20	0	2	.....	.....	.....	.....	A. E. Rowell.
Effingham	Florence	106	19	.....	.....	.....	.....	.....	.....	.....	0.30	− 3.29	0.30	0	1	25	0	6	e.	H. B. McCall..
Ferguson	Berkeley	51	3	74.2	+ 3.6	99	25	39	8	48	0.15	− 4.35	0.15	0	1	20	7	4	ne.	E. L. Ostrander.
Florence	Florence	136	23	74.0	+ 1.4	100	26	43	7	40	0.20	− 3.52	0.12	0	3	21	1	9	sw.	H. K. Gilbert.
Georgetown	Georgetown	12	18	71.8	− 0.3	95	26	52	10	29	T.	− 3.51	T.	0	0	8	23	0	ne.	A. P. Hazard.
Greenwood	Greenwood	671	23	72.8	+ 1.4	98	26	44	6†	38	1.74	− 2.11	1.52	0	3	23	0	8	w.	M. M. Calhoun.
Heath Springs	Lancaster	568	10	74.8	.....	101	26†	42	5	34	0.54	.....	0.27	0	3	25	4	2	ne.	J. A. Weaner.
Jacksonboro	Colleton	13	3	71.2[c]	.....	97	26	42	8	37	0.00	.....	0.00	0	0	23	3	5	se.	W. E. Haskell, jr.
Kingstree	Williamsburg	54	23	71.0	− 1.3	93	18	39	8	35	0.68	− 2.74	0.37	0	4	19	0	12	ne.	A. O. Matthews.
Liberty	Pickens	900	17	71.8	+ 2.6	97	26	41	7	38	2.59	− 0.87	1.20	0	6	19	10	2	e.	John T. Boggs.
Little Mountain	Newberry	711	18	75.7[b]	+ 3.6	101	26	47	5	33	0.29	− 2.95	0.14	0	4	25	4	2	w.	J. M. Sease, M. D.
Meriweather	Edgefield	.....	2	73.4	.....	100	26	45	6	42	0.18	.....	0.18	0	1	14	9	7	.....	Wm. S. Middleton.
Newberry	Newberry	502	7	73.4	+ 2.2	101	26	42	7	45	0.07	− 3.51	0.04	0	3	15	11	5	e.	W. G. Peterson.
Pelzer	Anderson	873	6	.....	.....	.....	.....	.....	.....	.....	2.04	.....	1.84	0	4	25	1	5	w.	John M. Ward.
St. George	Dorchester	109	23	75.1	+ 2.3	100	26	45	8	39	0.00	− 3.42	0.00	0	0	29	0	2	.....	G. T. Lewis.
St. Matthews	Calhoun	209	23	72.6	+ 0.5	96	26	47	7	35	0.19	− 3.73	0.16	0	2	24	0	7	.....	J. S. Wannamaker.
Saluda	Saluda	530	9	71.9	.....	103	26	36	7	49	0.25	.....	0.25	0	1	22	6	3	se.	Miss F. V. Jennings.
Santuc	Union	512	16	73.8	+ 3.9	106	26	40	6	45	0.37	− 2.88	0.20	0	4	15	11	5	ne.	E. W. Jeter.
Smith Mills	Williamsburg	52	16	.....	.....	.....	.....	.....	.....	.....	0.51	− 3.85	0.51	0	1	20	0	11	s.	N. Van Keuren.
Society Hill	Darlington	192	20	71.4	+ 0.3	97	26	43	7	33	0.62	− 2.90	0.42	0	3	17	10	4	ne.	Maj. J. J. Lucas.
Spartanburg	Spartanburg	875	20	71.4	+ 1.2	98	26	41	7	36	0.87	− 3.40	0.45	0	5	17	4	10	.....	F. P. Robinson.
Summerville	Dorchester	75	14	73.4	+ 1.6	101	26	44	7†	38	0.25	− 3.26	0.25	0	1	11	20	0	sw.	Miss E. H. Gadsden.
Trenton	Edgefield	620	18	73.6	+ 0.8	100	26	45	5	38	0.58	− 2.56	0.24	0	3	22	7	2	s.	C. A. Long.
Walterboro	Colleton	69	7	74.8	.....	103	26	42	8	45	0.18	.....	0.18	0	1	22	6	3	.....	J. A. Westerberg.
Winnsboro	Fairfield	545	21	71.7	+ 0.4	96	26	45	6	29	1.53	− 1.88	1.20	0	3	25	6	0	se.	J. W. Seigler.
Winthrop College	York	690	12	72.7	+ 2.5	98	26	42	6†	33	2.02	− 2.45	1.70	0	5	26	2	3	s.	E. R. Rivers.
Yemassee	Hampton	23	16	73.0	− 0.3	98	11†	42	8	41	T.	− 3.61	T.	0	0	24	0	7	.....	J. G. Hutson.
Georgia.																				
Abbeville	Wilcox	.....	8	.....	.....	.....	.....	.....	.....	.....	3.39	− 0.39	1.87	0	6	18	0	13	w.	W. H. Calhoun..
Adairsville	Bartow	772	19	71.5[f]	+ 2.2	95	26†	42	7	39[f]	2.78	− 0.77	2.00	0	3	23	4	4	.....	Dr. J. P Bowdoin.
Albany	Dougherty	230	25	75.6	+ 0.8	98	26†	48	8	36	3.35	− 0.29	1.12	0	11	20	4	7	ne.	George C. Brosnan.
Allapaha	Berrien	293	22	74.8	+ 1.2	96	26†	51	8	35	4.23	+ 1.13	1.90	0	8	14	12	5	ne.	James T. Austin.
Americus	Sumter	362	28	73.6	− 1.0	98	26	46	8	36	2.82	− 0.40	0.68	0	8	22	2	7	ne.	F. P. Harrold.
Athens	Clarke	694	34	72.2	+ 2.4	99	26	42	7	41	0.73	− 2.93	0.44	0	4	22	3	6	e.	C. D. Cox.
Atlanta	Fulton	1,218	46	72.0	+ 2.5	94	26	46	3	27	2.14	− 0.95	0.72	0	10	17	7	7	ne.	U. S. Weather Bureau.
Augusta	Richmond	180	45	73.7	+ 1.5	97	26	46	7	37	0.79	− 2.44	0.31	0	5	18	10	3	se.	Do.
Bainbridge	Decatur	110	19	77.1	+ 2.3	100	27	45	8	44	2.45	− 0.48	0.69	0	12	17	7	7	ne.	Mrs. C. O. Wimberley.
Barnesville	Pike	875	3	72.0	.....	93	26†	47	6	30	3.90	.....	1.20	0	8	24	2	5	w.	Prof. T. O. Galloway.
Blakely	Early	300	20	75.9	+ 1.7	101	25†	46	7	41	2.94	+ 0.17	0.78	0	7	15	15	1	s.	Ralph M. Hobbs.
Butler	Taylor	650	10	.....	.....	.....	.....	.....	.....	.....	3.86	− 0.17	1.10	0	7	20	0	11	e.	Mrs. Mamie F. Wallace.
Camak	Warren	613	19	75.2	+ 3.4	101	27	41	7	41	0.52	− 2.65	0.44	0	2	22	3	6	.....	J. A. Chapman.
Canton	Cherokee	894	20	.....	.....	.....	.....	.....	.....	.....	1.37	− 2.07	0.45	0	5	24	2	5	e.	G. W. Evans.
Carlton	Madison	557	12	.....	.....	.....	.....	.....	.....	.....	1.73	.....	0.69	0	4	26	0	5	ne.	M. C. Power.
Clayton	Rabun	2,100	17	66.4	+ 0.9	90	27	36	7	43	4.39	− 0.09	1.60	0	7	24	5	2	w.	A. J. Duncan.
Columbus	Muscogee	262	23	74.8	+ 2.2	98	26†	48	8	34	2.45	− 0.61	0.99	0	7	21	2	8	ne.	A. J. Land.
Covington	Newton	800	19	.....	.....	.....	.....	.....	.....	.....	3.15	− 0.12	1.05	0	5	16	11	4	e.	Mrs. Sarah E. Cruse.
Cuthbert	Randolph	446	11	.....	.....	.....	.....	.....	.....	.....	2.59	.....	0.98	0	5	.....	.....	.....	.....	Prof. W. McMichael.
Dahlonega	Lumpkin	1,519	21	69.8	+ 3.6	94	27	43	7	36	2.60	− 2.42	0.93	0	11	8	23	0	se.	Prof. B. P. Gaillard.
Diamond	Gilmer	2,020	21	68.0[a]	+ 2.9	92	27†	39	6†	42	2.14	− 3.18	0.82	0	5	21	8	2	.....	R. A. Kinzey.
Dublin	Laurens	452	17	.....	.....	.....	.....	.....	.....	.....	1.79	− 1.48	0.53	0	5	24	0	7	.....	Mrs. M. E. Martin.
Eastman	Dodge	361	19	74.3	− 0.1	96	12	49	6	33	4.05	+ 1.27	1.61	0	8	18	3	10	w.	Miss Annie Bohannon.
Eatonton	Putnam	.....	8	.....	.....	95	29	43	6†	34	1.29	.....	0.55	0	4	.....	.....	.....	.....	Prof. W. C. Wright.
Elberton	Elbert	710	20	73.8	+ 2.4	98	26	45	6†	39	1.06	− 2.04	0.35	0	4	25	6	0	w.	H. A. Roebuck.
Fort Gaines	Clay	166	24	74.5	+ 0.7	100	27	46	7†	36	2.51	− 0.92	0.95	0	5	17	0	14	ne.	Miss Eva T. Graham.
Gainesville	Hall	1,254	34	68.8	+ 0.9	96	26	39	7	44	0.83	− 2.82	0.37	0	5	21	4	6	e.	W. C. Walker.
Gillsville	do	1,052	21	72.0	+ 3.0	96	26	45	6	35	0.90	− 2.65	0.50	0	3	15	15	1	w.	J. W. Casey.
Glennville	Tatnall	.....	6	76.1	+ 1.9	95	26	56	7†	30	1.26	− 2.29	0.75	0	5	22	8	1	e.	Wm. C. Barnard.
Gore	Chattooga	.....	12	70.6	+ 2.9	97	27	40	7	44	2.94	− 1.52	1.44	0	5	24	4	3	n.	H. M. Ponder.
Greensboro	Greene	598	9	72.0	+ 1.0	97	26	43	8	41	1.48	− 1.43	0.88	0	5	20	5	6	e.	R. L. Caldwell.
Griffin	Spalding	975	22	72.2	+ 1.1	94	31	45	6	30	2.05	− 1.28	0.67	0	7	20	2	9	ne.	V. P. Enloe.
Harrison	Washington	245	12	72.0	− 0.2	95	26†	42	8†	44	1.08	− 2.25	0.28	0	5	27	2	2	e.	A. W. J. Wood.
Hawkinsville	Pulaski	235	16	74.4	+ 2.1	101	26	44	9	46	1.94	− 0.82	0.87	0	6	22	1	8	n.	R. H. Wood.
Helena	Telfair	260	4	75.3	+ 1.4	96	12†	46	8	36	1.69	.....	1.19	0	10	7	14	10	ne.	James D. Smith.
Lafayette	Walker	871	4	70.0	.....	96	27	38	4	45	2.50	.....	0.95	0	5	23	5	3	s.	Ralph A. Snow.
Lisbon	Lincoln	.....	4	72.4	.....	100	26	42	9	48	0.54	.....	0.25	0	3	22	2	7	sw.	B. J. DuBose.
Lost Mountain	Cobb	.....	11	73.4	+ 4.2	97	26	42	7†	38	1.48	.....	0.65	0	5	3	27	1	w.	A. N. Mayes.
Louisville	Jefferson	259	19	73.2	+ 1.1	96	26	45	9	40	0.53	− 3.08	0.23	0	3	17	14	0	.....	J. C. Little.
Lumber City	Telfair	.....	2	.....	.....	.....	.....	.....	.....	.....	1.11	.....	0.44	0	7	18	3	10	e.	Walter A. Hilton.
Lumpkin	Stewart	650	17	77.6	+ 4.5	98	27†	54	6†	41	2.14	− 1.06	1.61	0	2	9	21	1	se.	A. W. Latimer.
Macon	Bibb	370	33	73.2	+ 2.1	97	26	46	7	38	2.31	− 0.57	1.38	0	7	18	7	6	ne.	U. S. Weather Bureau.
Marshallville	Macon	500	19	73.2	− 0.7	98	27	44	7	34	2.63	− 0.52	1.21	0	8	17	10	4	w.	E. C. Bryan.
Milledgeville	Baldwin	276	23	74.2	+ 2.5	96	27	43	7	34	1.37	− 1.92	0.61	0	4	23	3	5	s.	Prof. O. M. Cone.
Mineral Bluff	Fannin	.....	.....	71.5[g]	.....	94	10	49	15	38[g]	1.30	.....	0.45	0	4	.....	.....	.....	w.	J. M. Clement.
Millen	Jenkins	158	24	74.0	+ 0.5	99	11	42	7	42	0.59	− 2.52	0.30	0	2	17	5	9	se.	M. G. McComb.
Montezuma	Macon	292	6	.....	.....	.....	.....	.....	.....	.....	3.69	.....	1.19	0	6	18	3	10	ne.	J. C. Collins.
Monticello	Jasper	800	16	72.8	+ 1.0	97	26	45	6†	33	2.08	− 1.12	0.90	0	7	23	0	8	.....	Miss Maude C. Penn.
Morgan	Calhoun	337	18	72.4	− 0.5	91	29	55	3	27	1.76	− 1.53	0.60	0	6	19	11	1	sw.	W. J. Ragan.
Newnan	Coweta	959	22	72.6	+ 2.1	96	26†	43	2	34	1.34	− 2.35	0.35	0	6	25	1	5	e.	Mrs. Ida J. Milner.
Norcross	Gwinnett	1,078	.....	.....	.....	.....	.....	.....	.....	.....	2.10	.....	0.72	0	7	19	6	6	.....	W. O. Medlock.
Point Peter	Oglethorpe	1,000	22	71.6	+ 2.1	98	28	44	7†	40	1.67	− 1.25	0.80	0	3	22	8	1	w.	C. M. Witcher.
Poulan	Worth	365	20	74.0	+ 1.1	96	26	48	8†	44	4.54	+ 1.39	1.21	0	11	21	4	6	.....	Dr. J. F. Wilson.

TABLE 1.—*Climatological data for May, 1911. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Georgia*—Continued.**																				
Putnam	Marion	.....	11	73.0	− 0.6	97	25†	46	6†	35	2.35	− 1.25	1.00	0	4	22	5	4	s.	Mrs. J. M. Collum.
Quitman	Brooks	173	25	74.9	+ 0.3	96	27†	47	8	39	4.92	+ 1.69	1.45	0	11	20	0	11	ne.	A. B. Jones.
Ramsey	Murray	1,363	18	70.0	+ 1.8	89	28†	43	3	35	1.29	− 2.54	0.48	0	6	22	7	2	n.	D. E. Humphreys.
Resaca	Gordon	657	17	.....	.....	.....	.....	.....	.....	.....	2.51	− 0.73	1.25	0	4	25	2	4	e.	D. A. Norton.
Rome	Floyd	576	55	72.2	+ 2.8	99	31	42	8	45	3.03	− 0.39	2.20	0	6	25	3	3	se.	W. M. Towers.
St. George	Charlton	.....	4	73.0	.....	94	27	44	8	38	3.32	.....	0.83	0	10	20	8	3	se.	A. N. Lund.
St. Marys	Camden	20	19	73.0	− 0.8	95	26	49	8	34	2.70	− 2.40	1.28	0	9	16	8	7	ne.	David C. Sterling.
Savannah	Chatham	65	61	72.6	+ 0.1	96	26	49	7	32	0.13	− 2.87	0.07	0	5	15	10	6	se.	U. S. Weather Bureau.
Statesboro	Bulloch	253	11	75.2	+ 1.1	100	26	48	7†	44	1.46	− 2.45	0.97	0	4	18	11	2	.....	W. C. Cromley.
Talbotton	Talbot	750	18	72.7	+ 0.7	98	13†	42	6†	43	4.14	+ 1.18	1.40	0	7	19	4	8	ne.	Dr. E. L. Bardwell.
Tallapoosa	Haralson	1,150	12	71.5	+ 2.2	97	27	42	7	38	2.15	− 0.91	1.28	0	5	22	4	5	nw.	Elmer C. Bishop.
Thomasville	Thomas	273	29	74.6	+ 0.6	97	27	46	8	40	2.50	− 1.51	0.95	0	9	15	12	4	e.	U. S. Weather Bureau.
Toccoa	Stephens	1,050	26	71.4	+ 3.1	94	26	45	6	33	1.16	− 2.96	0.52	0	6	23	0	8	e.	Mrs. Alice N. Starke.
Valdosta	Lowndes	210	6	76.1	.....	100	26†	45	8	43	3.45	.....	1.25	0	7	18	1	12	e.	Miss Annie Twitty.
Washington	Wilkes	630	23	74.2	+ 2.6	99	31	46	6	41	0.60	− 3.02	0.22	0	5	21	5	5	ne.	Miss Ella B. Smith.
Waycross	Ware	131	22	75.2	+ 0.5	98	26	44	8	46	0.71	− 2.62	0.21	0	7	23	4	4	e.	Thomas Sasser.
Waynesboro	Burke	86	20	74.7	+ 2.5	103	28†	44	7	46	0.49	− 3.00	0.29	0	3	18	4	9	s.	Mrs. H. W. Blount.
West Point	Troup	620	22	73.1	+ 0.6	98	26†	44	7	40	3.53	+ 0.20	2.00	0	6	21	2	8	ne.	E. N. Dunn.
Woodbury	Meriwether	641	10	.....	.....	97	26	40	7†	....	3.40	− 0.36	0.93	0	7	22	5	4	.....	E. T. Riggins.
Florida.																				
Apalachicola	Franklin	24	7	75.5	.....	95	27	54	8	28	1.72	.....	1.00	0	3	21	8	2	se.	G. H. Whiteside.
Arcadia	De Soto	61	10	76.2	− 0.9	97	2	50	9	40	4.55	+ 0.87	1.74	0	10	23	7	1	e.	C. S. Bushnell.
Archer	Alachua	92	26	74.6	− 0.8	95	27	48	8	40	6.29	+ 2.70	1.91	0	12	18	2	11	.....	R. B. Hodgson.
Avon Park	De Soto	150	13	75.0	− 2.3	93	2†	51	9	36	4.54	− 0.27	1.48	0	12	19	4	8	ne.	O. R. Thacher.
Bartow	Polk	115	23	75.2	− 1.8	97	27	46	9	44	2.32	− 1.47	0.74	0	8	14	13	4	ne.	Wm. Hood.
Bradentown	Manatee	10	27	73.4	− 2.7	89	28	47	10	36	4.24	+ 1.37	1.54	0	9	17	13	1	.....	H. H. Tenbroeck.
Brooksville	Hernando	126	18	75.4[d]	− 1.3	95	11	49	8	36	4.95	+ 1.68	1.70	0	6	.....	.....	.....	ne	C. C. Peck.
Carrabelle	Franklin	10	12	76.9	+ 1.7	99	27	48	8	36	1.73	− 0.90	1.58	0	2	.....	.....	.....	.....	J. J. Blomquist.
Cedar Keys	Levy	10	22	75.8	+ 0.4	90	28†	54	8	24	2.19	+ 0.61	0.93	0	9	23	0	8	ne.	J. B. Lutterloh.
Clermont	Lake	105	18	76.4	− 1.9	97	27	52	8	33	2.68	− 0.87	1.25	0	7	14	13	4	ne.	S. S. Fesler.
De Funiak Springs	Walton	193	13	75.8	+ 2.1	99	27	50	8	36	4.29	+ 0.25	1.68	0	7	.....	.....	.....	s.	R. W. Storrs.
De Land	Volusia	27	14	73.2	− 1.9	93	11	46	8	39	3.54	.....	1.26	0	11	17	10	4	se.	O. B. Webster.
Eustis	Lake	56	20	76.2	− 1.1	95	11†	50	8	36	5.02	+ 1.78	2.10	0	.....	.....	.....	.....	ne.	C. T. Smith.
Federal Point	Putnam	5	19	74.0	− 0.4	96	27	49	8	35	2.22	− 1.59	1.09	0	10	17	9	5	e.	E. S. Hubbard.
Fenholloway	Taylor	75	4	75.5[b]	.....	100	27	49	8	39	6.96	.....	1.85	0	9	.....	.....	.....	.....	Miss E. Wigglesworth.
Fernandina	Nassau	10	18	72.9	− 0.8	90	26	54	8	30	1.40	− 2.29	0.85	0	6	22	3	6	ne.	W. B. C. Duryee.
Fort Meade	Polk	125	22	75.9	− 0.4	95	2†	47	9	42	4.14	− 0.36	1.35	0	8	21	5	5	ne.	G. L. Brodrick.
Fort Myers	Lee	12	39	75.7	− 1.4	92	28	56	9	30	8.49	+ 4.75	1.85	0	11	19	8	4	se.	Miss M. M. Gardner.
Fort Pierce	St. Lucie	6	10	74.4	− 1.4	90	2	54	9	33	7.05	+ 3.00	1.80	0	11	17	8	6	e.	T. C. Nicholson.
Gainesville	Alachua	176	17	74.2	− 2.2	97	27	48	8	34	4.45	+ 1.24	1.27	0	11	17	5	9	ne.	John Schnabel.
Grasmere	Orange	175	13	74.1	− 2.9	94	27	52	8	35	5.16	.....	1.33	0	9	20	6	5	.....	J. B. Escott.
Hilliard	Nassau	69	2	73.2	.....	93	11	45	8	42	3.70	.....	1.50	0	4	22	6	3	.....	B. A. Tibbits.
Homestead	Dade	5	1	75.0	.....	93	30	58	18	32	8.50	.....	2.85	0	14	14	11	6	e.	W. J. Krome.
Hypoluxo	Palm Beach	4	15	76.1	− 0.9	90	27†	56	9†	31	10.30	+ 4.90	2.66	0	12	19	5	7	ne.	G. A. Angevine.
Inverness	Citrus	43	11	74.3[e]	− 1.6	98	28	49	8	32	8.51	+ 4.80	1.50	0	8	.....	.....	.....	.....	W. H. Miller.
Jacksonville	Duval	101	40	73.7	− 0.5	92	11	52	8	29	3.33	− 0.92	2.20	0	9	14	8	9	ne.	U. S. Weather Bureau.
Jasper	Hamilton	152	10	74.0	− 0.9	95	11†	44	8	41	4.51	+ 0.62	1.40	0	10	15	6	10	e.	Mrs. W. C. Caldwell.
Johnstown	Bradford	125	11	73.7	− 1.0	95	11	43	8	40	6.16	+ 2.83	1.87	0	10	18	8	5	.....	A. M. C. Brasch.
Key West	Monroe	14	40	77.6	− 1.4	86	20	67	4	16	2.88	− 0.48	0.94	0	11	15	10	6	ne.	U. S. Weather Bureau.
Kissimmee	Osceola	65	18	76.2	− 1.2	97	27	54	8†	38	1.86	− 0.66	0.55	0	7	9	18	4	ne.	J. A. Simpson.
Lake City	Columbia	210	26	74.2	− 1.4	95	27	47	8	38	4.24	+ 1.13	1.30	0	8	18	11	2	ne.	W. B. Knight.
Live Oak	Suwanee	109	11	75.4	.....	98	27	46	8	39	9.29	+ 5.73	1.33	0	11	19	7	5	s.	J. D. Henry.
Macclenny	Baker	125	14	73.4	− 1.7	95	31	44	5	37	7.29	+ 2.98	2.14	0	5	16	11	4	.....	Griffing Bros. Co.
Madison	Madison	200	11	75.2	− 0.2	97	27	50	8	37	3.88	− 0.47	1.14	0	8	19	1	11	ne.	E. J. Vann.
Malabar	Brevard	24	17	73.6	− 2.9	92	27	48	9	42	6.33	+ 2.16	1.40	0	9	21	4	6	se.	J. F. Farley.
Marianna	Jackson	80	8	74.8	.....	98	27	45	8	40	2.09	.....	0.91	0	10	21	1	9	ne.	W. J. Watson.
Merritts Island	Brevard	20	28	73.4	− 3.1	89	27	56	9	26	4.46	+ 0.76	1.30	0	13	7	19	5	e.	F. Ulrich.
Miami	Dade	5	28	76.4	− 2.1	89	3†	59	11	25	12.12	+ 6.24	4.00	0	10	20	7	4	e.	E. V. Blackman.
Middleburg	Clay	10	10	73.5[d]	.....	95	11	44	8	39	4.12	− 2.62	2.01	0	10	.....	.....	.....	.....	G. A. Chalker.
Molino	Escambia	49	9	73.2[e]	.....	98[e]	27†	45[e]	8	40	3.45	.....	.....	0	.....	.....	.....	.....	.....	W. H. Trimmer.
Monticello	Jefferson	207	7	75.6	.....	98	27	46	8	40	4.17	.....	1.67	0	7	23	1	7	s.	E. C. Potter.
Mount Pleasant	Gadsden	260	5	75.2	.....	100	27	44	8	43	1.78	.....	0.75	0	6	.....	.....	.....	.....	Miss Addie Grubb.
New Smyrna	Volusia	9	26	73.6	− 0.1	96	27	54[a]	11	35	2.72	− 0.75	0.73	0	10	.....	.....	.....	.....	F. Nordman.
Ocala	Marion	98	21	75.6	− 0.4	97	28	48	8	38	5.99	+ 2.77	3.10	0	9	.....	.....	.....	.....	F. T. Schreiber.
Orange City	Volusia	39	17	73.4	− 3.4	95	2†	50	8	43	5.19	+ 2.03	1.28	0	10	17	6	8	e.	J. D. Graham.
Orlando	Orange	111	18	75.0	− 1.7	92	27	51	9	35	3.07	− 0.61	0.74	0	12	7	11	13	e.	James Thomson.
Pensacola	Escambia	149	31	74.8	0.0	92	27	57	3	21	2.04	− 0.64	0.71	0	7	16	13	2	s.	U. S. Weather Bureau.
Plant City	Hillsborough	121	17	76.3	− 0.1	98	27	50	8†	42	2.99	− 1.41	1.55	0	6	17	14	0	e.	E. B. Trask.
Rockledge	Brevard	28	3	73.0	.....	90	27	51	9	34	4.06	.....	1.23	0	10	21	6	4	se.	Rev. J. H. White.
Rockwell	Marion	10	9	72.6[d]	.....	95	11	47	13	46	7.11	+ 3.59	2.00	0	10	.....	.....	.....	.....	Dunellon Phos. Co.
St. Andrew	Washington	14	14	75.2	+ 0.5	99	30	47	8	38	1.89	− 3.20	0.86	0	7	24	6	1	w.	W. A. Emmons.
St. Augustine	St. Johns	10	59	74.3	+ 0.4	96	27	49	8	34	1.02	− 2.48	0.90	0	4	23	1	7	e.	E. F. Joyce.
St. Leo	Pasco	140	14	74.6	− 2.8	93	27	52	8	30	4.23	+ 0.35	1.22	0	9	15	9	7	e.	G. Schneider.
Satsuma Heights	Putnam	98	3	75.4	.....	97	27	49	8	38	3.24	.....	1.12	0	7	13	14	4	ne.	The Satsuma Co.
Switzerland	St. Johns	10	18	73.4	− 1.2	94	27	49	8	34	0.90	− 2.66	0.22	0	6	.....	.....	.....	.....	W. C. Steele.
Tallahassee	Leon	192	24	74.3	− 0.1	94	27	52	4†	32	4.20	+ 0.68	1.40	0	9	22	2	7	s.	W. H. Markham.
Tampa	Hillsborough	79	21	75.6	+ 0.1	92	11	55	8	28	3.14	+ 0.22	1.11	0	8	14	12	5	ne.	U. S. Weather Bureau.
Tarpon Springs	do	20	26	74.9	− 0.6	93	28	50	8	30	5.89	+ 3.91	2.49	0	10	18	6	7	w.	A. P. Albaugh.
Titusville	Brevard	6	15	74.7	− 0.3	97	27	51	9	39	5.23	+ 0.51	1.47	0	12	2	15	14	se.	F. M. Taylor.
Wausau	Washington	250	11	75.6	+ 0.4	99	24†	43	9	50	2.27	− 1.67	0.60	0	7	17	11	3	s.	C. Jones.
Alabama.																				
Alaga	Houston	105	6	.....	.....	.....	.....	.....	.....	.....	2.15	.....	1.06	0	8	.....	.....	.....	s.	James L. Willis.
Anniston	Calhoun	728	20	71.0	+ 2.6	95	31	43	7	38	3.29	+ 0.20	1.38	0	6	20	3	8	se.	U. S. Weather Bureau.
Ashville	St. Clair	685	18	71.6	+ 1.9	96	27	41	7	40	2.45	− 1.72	1.05	0	4	23	6	2	sw.	George R. Cather.
Auburn	Lee	732	29	74.2	+ 2.7	98	27	47	6	34	3.15	− 0.42	1.22	0	8	12	11	8	ne.	Dr. Jas. T. Anderson.
Benton	Lowndes	149	10	.....	.....	.....	.....	.....	.....	.....	3.40	− 2.54	1.64	0	5	.....	.....	.....	e.	S. T. Pruitt.
Bermuda	Conecuh	.....	24	72.6	+ 0.8	96	27†	45	7	37	4.34	+ 0.89	1.46	0	8	17	13	1	se.	M. J. Morris.
Birmingham	Jefferson	701	23	72.2	+ 0.6	94	31	45	3	31	3.39	+ 0.30	1.90	0	6	20	6	5	ne.	U. S. Weather Bureau.
Calera	Shelby	500	10	.....	.....	.....	.....	.....	.....	.....	2.10	− 2.72	1.02	0	3	.....	.....	.....	e.	L. G. Privett.
Camp Hill	Tallapoosa	738	10	72.6	+ 2.5	96	27†	45	7	45	1.96	− 2.43	1.26	0	4	27	1	3	e.	Dr. Lyman Ward.
Cedar Bluff	Cherokee	594	7	.....	.....	.....	.....	.....	.....	.....	4.38	.....	1.51	0	5	23	8	0	.....	Joe L. Daniel.
Citronelle	Mobile	331	23	74.1	+ 0.2	98	31	51	12	38	4.96	+ 0.67	2.36	0	8	21	8	2	s.	George A. Maloney.
Clanton	Chilton	590	18	71.8	+ 1.0	97	31	43	7	42	2.36	− 2.04	1.10	0	6	19	3	9	se.	Wallace C. Edler.

TABLE 1.—*Climatological data for May, 1911. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Alabama—Continued.																				
Cochrane	Pickens	100	1								1.19		0.57	0	3				nw.	T. H. G. Cook.
Cordova	Walker	334	20	70.8	+ 2.1	96	28†	40	6†	41	2.61	− 1.35	1.11	0	4	21	7	3	s.	Scott Maxwell.
Cullman	Cullman	802	3	69.6	.....	95	28	42	3†	41	2.80	.....	1.01	0	6	25	5	1	nw.	Eugene A. Grayot.
Dadeville	Tallapoosa	760	6								3.51	.....	2.00	0	4				e.	Dr. W. B. Fulton.
Daphne	Baldwin	.....	20	75.0	+ 1.2	96	30	55	2†	28	3.36	− 0.17	1.10	0	7	17	6	8	sw.	John H. Young.
Demopolis	Marengo	.....	19								1.78	− 3.05	1.15	0	4	27	1	3	nw.	George E. Pegram.
Eufaula	Barbour	200	27	72.3	− 0.5	97	27†	43	7	39	1.98	− 1.35	0.56	0	9	18	6	7	se.	Dr. J. B. Whitlock.
Evergreen	Conecuh	285	27	74.8	+ 2.1	100	27†	45	8	42	4.15	+ 0.63	1.25	0	5	23	0	8	n.	Robt. L. Whitcomb.
Flomaton	Escambia	91	19	74.6	+ 1.6	96	31	45	7	33	1.96	− 2.32	1.68	0	7	23	2	6	n.	T. J. Farris.
Fort Deposit	Lowndes	520	27	74.0	+ 0.7	98	31	50	6†	32	3.53	− 0.22	1.83	0	6	29	2	0	s.	J. F. Hattemer.
Gadsden	Etowah	621	27	71.8	+ 2.4	94	31	45	7	36	1.66	− 2.26	0.92	0	4	23	1	7	e.	D. P. Goodhue.
Goodwater	Coosa	826	16	73.2	+ 1.9	99	31	43	7	40	2.22	− 1.80	1.55	0	4	23	2	6	e.	Miss Daisy Buice.
Greensboro	Hale	220	32	74.2	+ 2.7	97	28	51	8	28	1.87	− 2.26	1.00	0	5	24	3	4	s.	W. E. W. Yerby.
Greenville	Butler	444	10								2.88	− 2.31	0.99	0	5					E. M. Lewis.
Hamilton	Marion	.....	15	70.7[a]	+ 0.7	99	31	39	7	43	2.75	− 1.38	1.38	0	3	24	2	5	sw.	Prof. H. O. Sargent.
Highland Home	Crenshaw	.....	19	74.8	+ 2.4	98	31	52	2†	32	4.09	+ 0.47	1.54	0	6	21	8	2	ne.	Prof. Samuel Jordan.
Livingston	Sumter	160	27	73.2	+ 1.0	98	29†	47	7	34	1.32	− 2.60	0.71	0	2	28	0	3	e.	Robt. L. King.
Lock No. 4	Talladega	510	14	71.4	+ 1.4	95	26†	41	5	41	2.33	− 2.28	1.35	0	7	26	0	5	w.	U. S. Engineers.
Maple Grove	Cherokee	.....	18	72.2	+ 3.3	99	31	43	6†	39	2.74	− 1.36	1.20	0	5	19	9	3	ne.	Mrs. A. L. Awbrey.
Mentone	Dekalb	1,595	4								2.51	.....	1.67	0	2	.....	.....	.....	e.	E. Mason.
Milstead	Macon	.....	8								3.36	.....	1.20	0	5	.....	.....	.....	e.	Evie Oswalt.
Mobile	Mobile	84	39	75.2	+ 1.6	97	30	56	7	25	5.08	+ 1.08	2.48	0	5	23	6	2	n.	U. S. Weather Bureau.
Montgomery	Montgomery	240	39	74.6	+ 1.1	98	31	50	7	28	4.59	+ 0.77	1.95	0	6	17	13	1	ne.	Do.
Newbern	Hale	.....	18	74.6	+ 2.0	100	28†	47	7	39	0.91	− 3.79	0.70	0	5	16	12	3	s.	Dr. J. Huggins.
Oneonta	Blount	857	17	68.6	− 0.1	97	29	40	8	42	1.68	− 3.08	1.10	0	6	18	6	7	ne.	Aquilla J. Ketchum.
Opelika	Lee	817	32	72.4	+ 0.6	92	26	48	6	28	2.57	− 0.93	1.05	0	7	22	2	7	e.	A. H. Read, jr.
Ozark	Dale	400	9	74.5	.....	98	27	52	8	33	4.26	.....	2.27	0	7	17	6	8	s.	Miss Lucy Sellers.
Prattville	Autauga	281	11	72.4	+ 1.4	95	27†	43	7	40	5.75	.....	2.80	0	6	18	11	2	e.	Jos. B. Bell.
Pushmataha	Choctaw	.....	20	73.0	+ 0.6	98	28†	46	6†	39	1.97	− 3.31	1.22	0	4	7	16	8	sw.	W. N. Horn.
Selma	Dallas	147	31	74.3	+ 1.9	100	31	46	7	37	2.00	− 1.28	0.70	0	7	23	1	7	e.	Charles F. Brislin.
Spring Hill §	Mobile	312	7	75.4	.....	99	30	53	8	31	4.57	.....	1.55	0	8	14	17	0	sw.	Spring Hill College.
Talladega	Talladega	554	21	72.6	+ 2.2	97	31	44	8	40	2.78	− 0.90	1.40	0	4	22	6	3	n.	W. E. Henkel.
Tallassee	Elmore	.....	20								4.23	+ 1.06	1.54	0	6	.....	.....	.....	ne.	P. A. Noble.
Thomasville	Clarke	385	20	73.2	+ 0.1	102	28	47	4†	40	3.53	− 0.68	1.50	0	5	24	2	5	n.	J. G. Forster.
Troy	Pike	581	3	75.4	.....	99	26†	51	7	32	1.31	.....	0.60	0	8	10	20	1	se.	Frank L. Zimmermann.
Tuscaloosa	Tuscaloosa	230	30	73.2	+ 1.3	100	31	46	8	41	1.38	− 2.13	0.81	0	5	26	0	5	s.	W. S. Wymann, jr.
Tuskegee	Macon	.....	11	75.4	+ 2.4	100	27	49	7†	37	4.09	+ 0.68	1.46	0	6	.....	.....	.....	.....	Prof. Geo. W. Carver.
Union Springs	Bullock	216	24	74.1	+ 0.9	96	27	50	7	31	1.58	− 2.27	1.05	0	3	12	19	0	se.	P. L. Cowan.
Uniontown	Perry	273	25	74.2	+ 1.6	99	30	50	2	33	0.90	− 2.97	0.32	0	5	17	14	0	nw.	F. D. Stevens.
Valley Head	De Kalb	1,031	26	71.0	+ 4.1	97	27	40	3†	42	2.84	− 1.75	1.10	0	5	25	6	0	n.	M. T. Floyd, M. D.
Wetumpka	Elmore	205	19	74.0	+ 1.1	97	27	45	7	40	5.78	+ 1.95	2.27	0	6	22	0	9	n.	U. S. Engineers.
Mississippi.																				
Aberdeen	Monroe	210	23	72.6	+ 1.9	98	28†	44	3†	36	3.62	+ 0.10	1.61	0	3	25	3	3	n.	L. D. Godfrey, jr.
Agricultural College	Oktibbeha	424	21	73.4	+ 1.6	100	29	43	3	33	1.92	− 2.04	1.02	0	3	24	6	1	s.	J. R. Ricks.
Bay St. Louis	Hancock	28	18	73.6	− 1.4	93	31	53	8	29	2.85	− 0.49	1.21	0	7	18	11	2	e.	Brother Stanislaus.
Biloxi	Harrison	24	20	75.2	− 0.2	94	13	55	7	28	3.40	− 0.27	1.15	0	8	22	5	4	se.	Miss M. Josie Pope.
Booneville	Prentiss	504	17	71.4	+ 1.9	97	28†	43	2†	32	0.88	− 2.73	0.48	0	5	23	7	1	s.	Dr. D. T. Price.
Brookhaven	Lincoln	500	23	73.9	+ 0.6	101	28†	48	6	36	1.82	− 2.30	0.61	0	8	23	5	3	e.	W. J. Bee.
Columbia	Marion	110	7								4.00	.....	1.14	0	10	23	4	4	ne.	N. R. Drummond.
Columbus	Lowndes	191	23	73.4	+ 1.2	100	27†	45	6	37	3.58	− 0.17	2.40	0	4	23	5	3	se.	J. B. Love.
Crystal Springs	Copiah	168	19	74.0	+ 1.1	99	28	48	6	33	3.98	− 1.04	1.70	0	5	26	4	1	.....	D. H. Miller.
Edinburg	Leake	.....	3	72.0	.....	100	31	42	6	39	0.59	.....	0.30	0	2	21	9	1	s.	J. Y. Blocker.
Enterprise	Clarke	248	6								2.35	.....	1.12	0	5	21	5	5	n.	J. B. Thompson.
Fulton	Itawamba	.....	2								1.52	.....	0.65	0	5	19	2	10	n.	A. L. Summers.
Hattiesburg	Forest	189	18	74.3	+ 0.2	102	30	47	6†	39	4.27	− 0.36	2.60	0	8	24	1	6	n.	T. C. Spence.
Hazlehurst	Copiah	460	21	72.9	− 0.1	99	28	48	6	34	1.44	− 2.97	0.69	0	5	21	2	8	ne.	J. D. Granberry.
Hickory	Newton	326	1								2.86	.....	1.31	0	4	27	1	3	.....	T. N. McMullen.
Jackson	Hinds	280	24	73.4	+ 0.7	100	28	44	6	37	2.07	− 1.78	1.44	0	6	17	10	4	ne.	A. S. Nall.
Lake	Scott	446	23	71.8	+ 0.6	98	30	42	6	34	1.78	− 2.35	1.40	0	4	25	4	2	se.	Mrs. Eddie McNeel.
Lake Como	Jasper	.....	8	73.2	.....	104	29	44	7†	41	0.84	.....	0.40	0	5	21	6	4	e.	C. Thigpen.
Laurel	Jones	241	7	73.0	.....	99	28†	46	7	36	1.85	.....	0.77	0	8	24	6	1	sw.	Thomas W. Flynt.
Leakesville	Greene	.....	17	75.4[d]	+ 1.7	98	30†	47	7	37[i]	5.06	+ 0.72	2.49	0	5	23[e]	5[e]	0[e]	.....	Dr. Sam Pool.
Louisville	Winston	561	22	72.6	+ 2.2	98	28†	45	2	34	1.63	− 1.90	0.75	0	4	.....	.....	.....	.....	B. T. Webster.
McNeill	Pearl River	230	8	74.4	.....	98	29†	53	8	35	2.91	.....	1.20	0	5	20	10	1	se.	Prof. E. B. Ferris.
Macon	Noxubee	185	23	73.8	+ 1.1	100	28†	45	6	35	1.65	− 3.19	0.83	0	3	25	3	3	w.	Finis E. Carleton.
Magnolia	Pike	415	15	73.7	− 0.2	100	29	46	7	34	2.15	− 2.82	0.98	0	6	11	16	4	se.	Miss Ruby V. Roberts.
Meridian	Lauderdale	375	21	72.7	+ 1.6	98	29	47	7	33	1.38	− 2.54	1.23	0	6	19	10	2	ne.	U. S. Weather Bureau.
Merrill	Greene	76	6								4.62	.....	2.00	0	7	22	3	6	e.	L. C. Helms.
Monticello	Lawrence	209	4	72.8	.....	100	28†	42	4†	41	1.84	.....	0.69	0	7	19	10	2	w.	Dr. G. A. Teunisson.
Okolona	Chickasaw	311	23	73.2	+ 1.2	100	28	44	2	33	1.40	− 3.68	0.51	0	5	23	5	3	ne.	D. H. Shell.
Pascagoula	Jackson	15	2	74.0	.....	94	13	55	8	30	3.51	.....	1.15	0	7	24	5	2	se.	Frederick Hess.
Pearlington	Hancock	10	23	73.8	− 0.2	98	31	51	8	32	2.92	− 0.45	1.37	0	3	23	7	1	e.	Miss Annette Koch.
Porterville	Kemper	.....	6	72.8	.....	101	28	43	7	39	2.39	.....	1.23	0	5	18	13	0	s.	I. S. Rea.
Shubuta	Clarke	197	6								3.82	.....	1.58	0	7	23	5	3	n.	George A. Floyd.
Waynesboro	Wayne	191	24	72.1	− 0.4	97	31	45	7	37	2.91	− 0.96	1.96	0	5	21	5	5	s.	R. S. Burke.
Woodland	Chickasaw	.....	2								2.68	.....	1.12	0	4	.....	.....	.....	.....	Tallahatchie Drainage Com.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 2, South Atlantic and east Gulf States.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Virginia.																																	
Arvonia	James				T.	.30			.21														.02				.01					.13	0.67
Ashland	do								.36	.02				T.											.06						.05	0.49
Buchanan	do	.10	.23		T.					.06									.18						T.			.55			.05	1.17
Callaville	Chowan								.85	.12																	T.				T.	0.97
Cape Henry	Coast							.05	.52	.01																.04						0.62
Catawba	Roanoke	.15							.10															.07			.10				1.18	.44	2.04
Charlottesville	James								.03														T.				T.					.95	0.98
Clarksville	Roanoke	.30							.40	.15															T.		.30						1.15
Columbia	James	.06			.34					.10																		T.			.20	0.70
Covesville	do								T.														T.							.10	.34	0.44
Danville	Roanoke	.08	T.			.16	T.		.07	06				.04	.16										T.			.41				0.98
Diamond Springs	Coast	.06							.63																T.	.01						0.70
Hampton	do	.04							.58																T.	.15	T.	T.				0.77
Hot Springs	James	.30	.01						.01		.18													.17			1.25			.01	.05	.42	2.40
Lassiter	do	.10							.29															.05								0.44
Lexington	do	.01	.19						.01		T.								T.					.01			.12				T.	.41	0.75
Lynchburg	do				.01				.37		.04		.03														.05			.01	.15	0.66
New Castle	do								.04	.05																			.10	.18	.21	.35	0.93
Newport News	Coast	.01							.47	T.															.01	.06	.08						0.63
Norfolk	do	T.						.03	.51	T.															T.	T.	.02					T.	0.56
Petersburg	James	.65							.67					.25													T.						1.57
Richmond	do	.02	.02						.20					T.											.02		T.	T.		T.		.34	0.60
Rocky Mount	Roanoke								.03		.10		.05	.04													.16	.25				.15	0.78
Saxe	do	.03				.16			.52					.15													.10						0.96
Spottsville (near)	Chowan								.73																	.03	.26					1.12	2.14
Williamsburg	James	.15							.20	.20															T.	.10							0.65
North Carolina.																																	
Beaufort	Bogue Sd	.25					.14	.28	.08																			.33	.02			.16	1.26
Belhaven	Pungo	.08							.73																			.20			.34		1.35
Caroleen	Santee	.01				.14								.06										.18									0.39
Chalybeate Springs	Cape Fear	.20				T.			.06				.19	1.68											T.		.50						2.63
Chapel Hill	do	.64							.18					.52	.83												.20						2.37
Charlotte	Santee	.02				.17			T.	T.				.36	.01									.47				T.				.20	1.23
Chimney Rock	do														.32									.98									1.30
Durham (near)	Neuse								.19					.70																	.78	1.67
Eagletown	Chowan	.05			T.				.47					.09											T.		.65	.15					1.41
Edenton	Albem'le Sd																									.30	.60						0.90
Elizabethtown	Cape Fear																											.27					0.27
Enfield (near)	Tar	.35							.35						.05													.02					0.77
Fayetteville	Cape Fear	T.	.01							.04					.12										.01			.48					0.66
Goldsboro	Neuse	.30	T.							.01	.04				.13											T.		.09					0.57
Graham	Cape Fear				.07	T.			.07	.26				.42	.52										.01			.23					1.03
Greensboro	do					.48	.05			.32	.04				.77													.07					1.73
Greenville	Tar	.43	.02				.04	.04	.15	.02					.60	T.												.23				.01	1.54
Hatteras	Pamlico Sd					.01	.09	.45	.05																				.05	.05	T.		0.70
Henderson	Tar & R'nke	T.							.79					.21											T.		.39				1.55	2.94
Kings M't'n (near)	Santee	.02				.38								.04						.03												.03	0.50
Kinston	Neuse	.30					.34		T.																T.			.40		T.	.56		1.60
Lenoir	Santee	.02				.03							.50								.62	.02										.48	1.67
Lincolnton	do					.40								.45						T.	.08				.01			.02				.25	1.21
Louisburg	Tar	.35							.30	.10					.17										.05			.16					1.13
Lumberton	Lumber	.01	.01							.01					T.											T.		.37					0.40
Manteo	Roan'ke Sd								.76																					T.			0.76
Marion	Santee	.01			T.	.03							T.	.34	T.						.59			.24	.02						T.	.59	1.82
Middletown	Pamlico Sd	.21	T.			.03	T.	.18	.76																			.02					1.20
Moncure	Cape Fear	.15	T.						T.	.09				.11	.67										.04			.27					1.33
Monroe	Pedee	T.							T.					.39							.20				.05								0.64
Morganton	Santee					.03								.57							.59			.08								.03	1.30
Mount Airy	Pedee	T.				.03			T.				.04	1.37														.09				T.	1.53
Mount Holly	Santee		.07			.10	.12								.30										.05								0.64
Nashville	Tar	.40							.20	.10					.11										.42			.02					1.25
Newbern	Neuse	.64	T.				.15	.13	.14																	T.		.27			.05	.06	1.44
Pinehurst	Lumber	T.				T.			.04	.02				.10	.25			.60							.01		T.	.30					1.32
Pittsboro	Cape Fear								.20					.05	.60												.30						1.15
Raleigh	Neuse	T.	T.						.13				T.	.68											.02		.60					.67	2.10
Ramseur	Cape Fear	.05				.02			.23	.01				.04											.01			.40					0.76
Randleman	do	.18				.06				.22				.09	1.90													.29					2.74
Reidsville	do	.04				.16	.06		.05	.27					.25										.03			.14					1.00
Rock House	Savannah	.29			.09	.35								.05				T.	.17	.13	.46		T.	.84				.32			.21	T.	2.91
Rockingham	Pedee													.32										.31	.07		.08				.60	1.38
Rocky Mount	Tar								.80	.08															.07								0.95
Roxboro	Roanoke							.10	.12					.60													.50					1.20	2.52
Salem	Pedee					.28				.05				.95													.08						1.36
Salisbury	do					.15	.10			.10					.68										.20		.06						1.29
Saxon	Roanoke					.05			.14					.43											.05		.05					.47	1.14
Scotland Neck	Tar								.43																.13		.21						0.77
Selma	Neuse								.55					.40													.25						1.20
Settle	Pedee					.23			T.	T.				.50																			0.73
Sloan	Cape Fear					T.	.30																		T.		.17			T.	.03	.04	0.54
Snow Hill	Neuse	.09					.02		T.	.04								T.							T.			.33					0.48
Southern Pines	Cape Fear	T.							.12					1.25	.50										.10			.20					2.17
Southport	do				.03		.25	.11								T.											.16	.39					0.94
Statesville	Pedee					.30								1.10																			1.40
Tarboro	Tar		.02						.33	.03					.14									T.				T.					0.52
Weldon	Roanoke	.18	T.						.44	.06															T.	T.		T.					0.68
Whiteville	Waccamaw						.03		.04																			.41				.02	0.50
Willard	Cape Fear	.15					.25	.05																				.25			.01		0.71
Wilmington	do						.03	.06	T.							.02	.01										.14			.02			0.28
South Carolina.																																	
Aiken	Edisto																								.75								0.75
Allendale	Savannah	.20																														.04	0.20
Anderson	do	.49				.08								.10										1.70									2.41
Batesburg	Edisto	T.	.42								T.			.12	.04																	.04	0.58
Beaufort	Ocean																T.																T.
Blackville	Edisto		.07												.08			.02							.05	.06							0.28

TABLE 2.—*Daily precipitation for May, 1911. District No. 2*—Continued.

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
South Carolina—Continued.																																	
Blairs	Broad		.05											.15											.34								0.54
Bowman	Edisto														.96		.12								.05							.30	1.43
Calhoun Falls	Savannah		.34												.31										.01	.18							0.84
Camden	Wateree		.06																														0.06
Catawba	Catawba	.18	.06												.25										.28								0.77
Chappells	Saluda				.06																												0.06
Charleston	Ocean			T.			T.								T.	.02	.11								T.						T.		0.13
Cheraw	Pedee	.02	.02							.03				.12	T.	.01									.02			.03					0.25
Clemson College	Savannah	.20				.10								.68							.29			.51									1.78
Columbia	Congaree	T.											T.	T.			T.			T.					.14		T.					.56	0.70
Conway	Waccamaw						.10			T.								.35											.03				0.48
Darlington	Pedee	.21																								.06		.07					0.34
Dillon	Little Pedee					T.			T.					.20											T.		T.	.09		T.			0.29
Effingham	Lynches		T.													.30										T.							0.30
Ferguson	Santee														T.													.15					0.15
Florence	Pedee	.12													.03											.05		T.					0.20
Georgetown	Ocean																T.																T.
Greenwood	Saluda		.17												.05										1.52								1.74
Heath Springs	Wateree														.15											.12						.27	0.54
Jacksonboro	Edisto																																0.00
Kingstree	Black	.10													.26		.05					.37						T.					0.68
Liberty	Savannah					.05								1.20						.25	.30			.55								.24	2.59
Little Mountain	Saluda	.05												.05						T.					.05							.14	0.29
Meriwether	Savannah													T.							T.		T.	.18									0.18
Newberry	Saluda	.04																		.02					.01								0.07
Pelzer	do		.16			.04									T.									1.20	.64								2.04
St. George	Edisto																																0.00
St. Matthews	Santee														.16										.03								0.19
Saluda	Saluda	.25																															0.25
Santuc	Broad	.11				.03								.02							T.			.01								.20	0.37
Smith Mills	Pedee									T.											.51												0.51
Society Hill	do																							.15		.05						.42	0.62
Spartanburg	Broad		.10			.02									.45						.05				.25								0.87
Summerville	Ashley								T.						T.		.25								T.			T.					0.25
Trenton	Edisto	.24												19										T.	.15								0.58
Walterboro	Ashepoo																18																0.18
Winnsboro	Broad	T.											1.20	.10																		.23	1.53
Winthrop College	Catawba	.09				.02				T.				T.	.10										1.70	.11							2.02
Yemassee	Combahee																T.																T.
Georgia.																																	
Abbeville	Ocmulgee		.55	T.											.65		.10		T.	.17	T.		.05		1.87								3.39
Adairsville	Coosa	T.																				2.00	.60	.18									2.78
Albany	Flint		.35	.06	.08									T.	.18		.10		.18	.66	.02	T.	.12	.48	1.12								3.35
Allapaha	Allapaha				.06											.06				1.30	.57	1.90	.12	.11	.10								4.23
Americus	Flint		.47	.09											.11						.10	.55	.68	.46	.36								2.82
Athens	Oconee		.44			T.															.07	.10			.12								0.73
Atlanta	Chat'ho'chee	.09				.38									T.					.02	.53	.19	.26	.38				.01	.13	T.		.15	2.14
Augusta	Savannah	.04												.31			.10				T.		T.	.11	T.							.23	0.79
Bainbridge	Flint	T.	.10	.08											.10		T.		.15	.69	.31	.36	.03	.13	.04	.20	T.		.26				2.45
Barnesville	do	.85												.05	.85					.02	.48	1.20	.15	.30									3.90
Blakely	Chat'ho'chee	.78		.15										T.		T.		.50	.40	.51	T.	T.	.48	.12									2.94
Butler	Flint		.71												.35						.10	.74	.39	.47	1.10								3.86
Camak	Savannah		.44												T.						.08												0.52
Canton	Coosa		.12																		T.	.45	.42	.26									1.37
Carlton	Savannah		.44												.42								.18		.69								1.73
Clayton	do	1.17			T.	.19		.15						T.					T.		T.	1.60	.02	T.	1.01			T.		.25			4.39
Columbus	Chat'ho'chee		.89												.13	T.				T.	.18	.04	.17	.99	.05								2.45
Covington	Ocmulgee		.60												1.05							.80		.45	.25								3.15
Cuthbert	Chat'ho'chee																	.21	.98	.25			.70	.45									2.59
Dahlonega	do	.11	.02											.23				T.			.15	.26		.93				.16	.48	.05	.01	.20	2.60
Diamond	Tennessee	.55																T.		T.	.20	.45	T.	.82						T.	T.	.12	2.14
Dublin	Oconee		.43												.18						.25	T.		.53		.40							1.79
Eastman	Ocmulgee		.28												.47			.64			.92	.04	T.	.06	1.61	.03							4.05
Eatonton	Oconee	.40													.14								.55	.20									1.29
Elberton	Savannah	.24												.35							.12			.35									1.06
Fort Gaines	Chat'ho'chee		.60	T.											.36					T.	.30	T.	.30	.95									2.51
Gainesville	do		.16			.02																.23		.37	.05								0.83
Gillsville	Savannah	.15																			T.	T.	.25	.50									0.90
Glennville	Altamaha			.02												.03	T.							.75	.32							.14	1.26
Gore	Coosa	.62																			.57	1.44	.15	1.6									2.94
Greensboro	Oconee	.08	.38																		.88	.10		.04									1.48
Griffin	Chat'ho'chee		.67												.15						.30	.35	.08	.35	.15								2.05
Harrison	Ogeechee	.24												.16									.20	.20	.28								1.08
Hawkinsville	Ocmulgee		.32	.33												.08						.30		.87	.04								1.94
Helena	do	.10	.01	T.												.01	.01	T.	T.	.02	.19	.11	.0	.02	1.19	T.							1.69
Lafayette	Tennessee				.20																.95	.45	.4	.47								T.	2.50
Lisbon	Savannah	.17												.12										.25									0.54
Lost Mountain	Chat'ho'chee	.24				.15														T.	.20	.65							.24	T.			1.48
Louisville	Ogeechee																							.23	.09							.21	0.53
Lumber City	Ocmulgee		.08		.04												.02	.14			.38	.01		.44									1.11
Lumpkin	Chat'ho'chee	.53												T.					T.	T.	T.	T.	1.6										2.14
Macon	Ocmulgee	.21												.39							.16	.0	1.0	2	.37							.14	2.31
Marshallville	Flint	.03	.33	T.											.10					T.	.16	1.21	.19	.49	12								2.63
Milledgeville	Oconee		.22												.10						.38			.61									1.37
Millen	Ogeechee		.29																						T.	.30							0.59
Montezuma	Flint	.41																		.07	1.19	.32	.65	1.04									3.60
Monticello	Ocmulgee		.90												.42			.05			.03	.25		.27	.16								2.08
Morgan	Flint	.60																.50	.14			.16	.26	.10									1.26
Newnan	Chat'ho'chee	.05	.25																			.30	.35	.34	.05								1.34
Norcross	do		.14				.24									.04						.54	.38	.72	.04								2.10
Point Peter	Savannah	.34												T.							.53			.80									1.67
Poulan	Suwanee	.24		.03														.02	.01	.48	1.21	.32	.80	.95	.26							.22	4.54
Putnam	Flint	.75																	.20	1.00			.40										2.35
Quitman	Suwanee			T.	.32		.16											.21	.20	.28	.26	.57	.75	1.45	.22		.50						4.92
Ramsey	Coosa	.35																	T.			.06	.48	.08	.27							.06	1.29
Resaca	do	.28																				.90	.08	1.25									2.51
Rome	do	.03	.09																		.05	2.20	.16	.50									3.03
St. George	St. Marys				.70	.40											.22	.05	.05	.10	.22	T.	T.	.83	.05		.70						3.32
St. Marys	do			.05	1.28		.02								.62	.21		.02	.18	.03				.29									2.70
Savannah	Savannah			.01		T.	T.								.01	.03	.04			.04		T.	T.		T.	T.							0.13

TABLE 2.—*Daily precipitation for May, 1911. District No. 2*—Continued.

Stations.	River basins.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Georgia—Contd.																																	
Statesboro ‖	Ogeechee														T.	.08	.97			.08		T.		.33	T.								1.46
Talbotton	Chat'ho'chee	.70																		.42	1.00	.28	.30	1.40	.04								4.14
Tallapoosa ‖	Coosa	.10	.12																			.50	1.28	.15									2.15
Thomasville	Ockl'ck'nee.	T.		.25		T.										.05		.05	.95	.12	.52	.16	.34	T.	.06				T.				2.50
Toccoa ‖	Savannah		.08			.22																.17		.52	.10							.07	1.16
Valdosta ‖	Suwanee			T.	.30											T.	.10		T.	1.25	T.	.35	.50	.45		.50							3.45
Valona	Ogeechee													.45					T.		.20											.08	0.73
Washington ‖	Savannah	.05	.20												.08								T.	.05	.22								0.60
Waycross ‖	Satilla			T.	.09	T.										.20	.06	.01		.08				.06		.21							0.71
Waynesboro ‖	Savannah		.18												.02			.29							T.	T.							0.49
West Point ‖	Chat'ho'chee	.08	.50																		.35	.25		.35	2.00								3.53
Woodbury ‖	Flint	T.	.84												.56						.35	.48	.12	.93	.12								3.40
Florida.																																	
Apalachicola	Coast	.25		1.00										T.	T.	.13	.07	.63	.03	1.74	.02	.20	.20	T.	47								1.72
Arcadia	Peace Creek				1.10	.43									.05	.55	.43		.01	.55	.10	1.65	1.91		.18								4.55
Archer	Waccasassa		.01	.35	.50									T.	.38	.13	.28	.02	.22	1.48	.20	.49	.43					T.					6.29
Avon Park	Kissimmee			.26	.50	.15	T.									.02	.22	.06			.47		.74						.20				4.54
Bartow ‖	Peace Creek				.48	.13								.20		.40	.02	.80	.40		1.54	.16	.14										2.32
Bradentown	Manatee				.58											.50				1.11	.74	1.70	.38										4.24
Brooksville	Withlacoochee.				.52																												4.95
Carrabelle	Coast			1.58																					.15								1.73
Cedar Keys	do				.64											.05	.11	.08	.09	.05		.93	.16	.08									2.19
Clermont	Lake				.45										.05	.10	.65	.08	.10			1.25												2.68
De Funiak Springs	Choctawhatchee.	.76		.20												.08		.46	.43	.68		1.68											4.29
De Land	St. Johns				.24	.06	.01								.19	1.26	.14	.25	.14	.02		.76	.47	T.									3.54
Eustis	Lake				.67										*	1.20	.65	T.				*	2.10					.40				5.02
Federal Point	St. Johns			T.	1.09	T.									.06	.28	.08	.16	.19	.05	T.	.04	.19		T.	.08							2.22
Fenholloway	Fenholloway			.50	1.20											.59	.15		.34	.50	1.35	1.85			.48							6.96
Fernandina	Coast			T.	.85	.02									.24	.23	.04						.02									1.40
Fort Meade	Peace Creek			.55	1.35									T.	T.	T.	.52	.06		.63		.11	.81						.11				4.14
Fort Myers	Caloosahatchee.				1.85	.31	T.						T.	.42	1.02	.10	1.74	1.28	.68	T.	.75	.03										.31	8.49
Fort Pierce	Indian				.40	.10								.50	.75	.80	.30	1.60	1.80		.50	.10	.20										7.05
Gainesville ‖	Lake			.02	.51	.31										.23	.59	.45		.02	.20	T.	1.27	.19		.66							4.45
Grasmere	do			T.	1.20	T.	T.								.05	1.33	.58	.05	.06	T.		1.26	.55					.08					5.16
Hilliard	Nassau				.85										T.	T.	.10	T.	1.50						1.25								3.70
Homestead	Coast					.38	2.42	.02						.10	.07	.10	.87	2.85	.08	.15		.11		.24		.01						1.10	8.50
Hypoluxo	Lake				2.66	.15	.26								1.74	.38	1.21	.90	1.79	.64			.35						.19	.03			10.30
Inverness ‖	Withlacoochee.					.44										1.47	1.50				1.40	1.30	1.00	1.00	.40				T.				8.51
Jacksonville	St. Johns		T.	.48	1.72										.33	.06	.01	.10	.36	.25		.02	T.		T.								3.33
Jasper	Suwanee			.05	.63											.14	.57	.21	1.40	.35		.85	.10		.21								4.51
Johnstown	do			1.87	.59										.12			.24	.09		.44	1.07	.10	.15	1.49								6.16
Key West	Coast	.01			.76	.28	.23			T.				T.	T.	.55	.43	T.	.10	.20	T.	.15	T.		T.	.22		.02					2.88
Kissimmee	Kissimmee				.18											.12		.10	.10	.10	.94		T.	.53		T.			.25				1.86
Lake City ‖	Suwanee				1.30	.60										T.	.50	.06	.05	T.	.21	T.	.99										4.24
Live Oak	do			.20	1.25											1.33		1.17	.36	.56	1.15	.55	1.05		.85	.82							9.29
Macclenny	St. Marys			.70	2.10											.45						1.90				2.14							7.29
Madison ‖	Suwanee				.40	.01													.35	.66	1.14		.98	.32		.02							3.88
Malabar	Indian				.24		.14								1.35	1.25	.41	1.40	1.34	.06		.14											6.33
Marianna ‖	Apalachicola		.02	.12	.04														.32	.91	.42	.07	.15	.02				.02					2.09
Merritts Island	Indian				.64		.08	.09							.35	.32	.03	1.23	1.30		.14	.01	.23		T.				.02	.02	T.		4.46
Miami	Coast				1.40	1.00	.35		.47						.55	.65	2.00	4.00	.60	T.	1.10					T.	T.						12.12
Middleburg	St. Johns				.17										*	.32	.13	.16	.31	.75	.06	*	2.01		.10	.11							4.12
Molino	Escambia														*	*	*	*	*	*	2.00				1.20							.25	3.45
Monticello	Aucilla			.30														.37	1.60	.13						.56							4.17
Mount Pleasant	Apalachicola																.20		.03	.45	.75	.05	T.	T.		.30		T.					1.78
New Smyrna	Coast						.47	.02	.03							T.		.73	.11	.45	.38	.15	.03		.35								2.72
Ocala ‖	St. Johns				.42	.18										.97	.05	.87	.20	T.	T.	T.	3.10	.10		.10							5.99
Orange City	do			T.	.53										.60	1.06	.12	.68	.22	.07	.48	1.28	.15										5.19
Orlando	do				.50	T.	.05							T.	.02	.74	.28	.02	.13	.15	.11	.12	.50						.45		T.		3.07
Pensacola	Coast	.71		.58												T.	T.			.07	.61	.02	.01						T.	.04		2.04
Plant City	Hillsboro				.32											.40	.22			.25		1.55	.25										2.99
Rockledge	Indian				.45		.10								.83	.26	.09	.65	1.23		.06	*	2.60	.01	.66	.44			.21	.18			4.06
Rockwell	Withlacoochee.				.89	.02									*	.44	.67			1.48	.50											7.11
St. Andrew	Coast			.86										.44		.01		.14	.10				.26		.08							1.89
St. Augustine	do				.90											.04		.07					.01									1.02
St. Leo	Withlacoochee.			.01	.65										.01	.34	.17			1.11	.01	1.22	.71										4.23
Satsuma Heights	St. Johns			.38	.40										.72	.09	.46	.07	T.	T.	T.	1.12											3.24
Switzerland	do		T.	*	.22												.15	.10			.15	.17	.11										0.90
Tallahassee ‖	Ocklocknee			.03	.25										T.		.27	.05		.80	T.		1.05	.20	.15	1.40					T.		4.20
Tampa	Coast				.33										.01	.69	.07		1.11	T.	.48	.35	.10										3.14
Tarpon Springs	do			.01	1.62									T.	.05	.77	.05		.15	.16	.15	2.49	.44										5.89
Titusville	Indian				.17	.02	.22								1.47	.62	.35	.67	1.07	.16	.05	.10	.33										5.23
Wausau	Choctawhatchee.	.05		.11														.35	.40			.40	.36	.60									2.27
Alabama.																																	
Alaga ‖	Chat'ho'chee		.15	.04	T.														.14	.68	.38	.18	.20	.38	T.							T.	2.15
Anniston	Coosa	.34																		.24	.55	.78	1.35	.03									3.29
Ashville	do		.30																		1.02	.08	1.05										2.45
Auburn	Tallapoosa	1.22																	.02	.01	.06	.03	.01	1.20	.60	T.							3.15
Benton ‖	Alabama	.16	1.64																		.32	.09	.59										3.40
Bermuda	Escambia	1.46		.22														T.		.40	.35	T.	.08	.07	.81			T.	.95				4.34
Birmingham	Bl'k Warrior	.05																		.48	.82	1.41	.60									.03	3.39
Calera ‖	Coosa	.48																			1.02		.60										2.10
Camp Hill	Tallapoosa	1.26																		.20	.45	.05											1.96
Cedar Bluff	Coosa		.30																		.96	1.50	1.51									.11	4.38
Citronelle	Alabama	2.36		.32														.07	.53		.47	1.17	.02	T.	.02	T.			T.				4.96
Clanton ‖	Coosa	.30	.15																		.32	.08	1.10	.41									2.36
Cochrane ‖	Tombigbee	.57																				.25		.37									1.19
Cordova	Bl'k Warrior	.50																		T.	.20	1.11	.80									T.	2.61
Cullman	do	.67																		.09	.82	.15	.86									.21	2.80
Dadeville ‖	Tallapoosa		.79																		T.	.53		2.00	.19								3.51
Daphne	G. of Mexico	.90		.30	T.												T.		T.	T.	1.10	.77	.08	.06	.15								3.36
Demopolis ‖	Tombigbee	.30																				1.15	.05	.28									1.78
Eufaula ‖	Chat'ho'chee	.02	.54	.08											.12		T.		T.	.56	.14	.04	T.	.42	.06								1.98

TABLE 2.—*Daily precipitation for May, 1911. District No. 2*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
***Alabama*—Contd.**																																	
Evergreen ‖	Escambia		1.25	.10																		1.22	.62							.96			4.15
Flomaton	do	1.68																	.08	.04	.03	.04								.06	.03	T.	1.96
Fort Deposit ‖	do	.10	1.83	.05																T.	.05		.80		.70								3.53
Gadsden ‖	Coosa																				.34	.74	.18	.40									1.66
Goodwater ‖	do		.48																			.19	.08	1.47									2.22
Greensboro ‖	Bl'k Warrior		.11																	.10		1.00	.17	.49									1.87
Greenville ‖	Escambia		.99		.32															.42			.38		.77								2.88
Hamilton	Tombigbee	.43																			1.38	T.	.94										2.75
Highland Home	Escambia	1.54		.05	T.														T.	.15	T.	.70	1.37		.28								4.09
Livingston ‖	Tombigbee	.71																						.61									1.32
Lock No. 4	Coosa	.22																		.08	.30	.06	.90	.45								.32	2.33
Maple Grove	do	.26																.15		.03	1.20		1.10									T.	2.74
Mentone ‖	do																				1.67		.84										2.51
Milstead ‖	Tallapoosa		1.20																		.60	.60		.90	.06								3.36
Mobile	G. of Mexico	.80	T.	.31											T.		T.	T.			2.45	1.46	.06	T.						T.			5.08
Montgomery	Alabama	1.63																1.27	.68		T.	.56	.27	T.								.18	4.59
Newbern	Bl'k Warrior	.07																			.07	.70	.02					.05					0.91
Oneonta	do	.38																.05		.05	1.10	.05	.05										1.68
Opelika ‖	Tallapoosa	.30	1.05																		.22	.18	.14	.57	.11								2.57
Ozark ‖	G. of Mexico		.82	.20	.22															1.65	.62	.40			.35								4.26
Prattville	Alabama	.87																	.51	.52	T.	2.80	.30	.75									5.75
Pushmataha	Tombigbee	1.22																	T.	T.	.33	.12	.30										1.97
Selma ‖	Alabama	.22	.68																	.20	.08	.06	.70	.06	T.								2.00
Spring Hill ‖	G. of Mexico	.06	.96	1.31												.04					1.55	1.40	.20		.05								4.57
Talladega	Coosa	.26																		T.	.95	.17	T.	1.40								T.	2.78
Tallassee ‖	Tallapoosa	.08	1.44																			25	.88	1.54	.04								4.23
Thomasville ‖	Tombigbee	.55	1.50	.04																		44	1.00	T.						T.	T.		3.53
Troy	Escambia	.60		.10												T.		.09	.33	.09	.01		T.	.08		T.	T.			.01			1.31
Tuscaloosa ‖	Bl'k Warrior	.30																				81	.09	.05								.13	1.38
Tuskegee	Tallapoosa	1.12																		.02	1.46		.46	1.00								.03	4.09
Union Springs ‖	do		1.05														T.			.05	T.			T.		.48			T.				1.58
Uniontown	Bl'k Warrior	.32																	T.	T.	.30	.12	.15	.01					T.	T.			0.90
Valley Head	Coosa	.35																		T.	1.10	.47	.30	.62									2.84
Wetumpka ‖	do	2.27																			.45	.27	1.06	1.43	.30								5.78
Mississippi.																																	
Aberdeen ‖	Tombigbee	.42																				1.61	1.59										3.62
Agricul. College	do																		T.		.40	.50	1.02										1.92
Bay St. Louis	Coast	1.21	T.	.28			.01													.37	.20	.77			.01								2.85
Biloxi	do	1.14		.30														.02		.10	.35	1.15			.30					.04			3.40
Booneville	Tombigbee													.13					T.		.12	.48	.13								.02		0.88
Brookhaven ‖	Pearl	.61	.10	.16															.07	.10	T.	.33									.03	.42	1.82
Columbia ‖	do	1.14	.34	.14															.04	.34	.04	.52	.18	1.08							.18		4.00
Columbus ‖	Tombigbee	2.40																				40	.33	.45									3.58
Crystal Springs ‖	Pearl	1.70																		.28		23								1.47	.30		3.98
Edinburg	do																		T.	T.		T.	.29	.30					T.	T.	T.		0.59
Enterprise ‖	Chic'sawhay	1.12	.06																T.	T.		1.00		.12						.05			2.35
Fulton ‖	Tombigbee	.26													.08						.09	.44	.65										1.52
Hattiesburg ‖	Leaf	2.60		.36														.05	.08		.18	.34	.28	.38	T.								4.27
Hazlehurst ‖	Pearl	.19		.03																.69		.46								.07			1.44
Hickory ‖	Chic'sawhay	1.31																			.35	.05	1.15										2.86
Jackson	Pearl	T.																	.26	.01	.04	.24								.08	1.44		2.07
Lake ‖	do	1.40																				.18	.10									.10	1.78
Lake Como	Leaf	.40	.13																.05	T.	T.	.20	.06						T.				0.84
Laurel	do	.77	T.	.18														.12	T.	.35	.18	.17	.07						.01				1.85
Leakesville ‖	Chic'sawhay	*	2.49																.20	.59				1.20	.58								5.06
Louisville	Pearl	.75																			.29	.18	.41										1.63
McNeill	do	1.20		.33															T.		.36	.77	.25							T.			2.91
Macon ‖	Tombigbee	.83																				29		.53									1.65
Magnolia	Pearl	.40	.02									T.							.98			T.	.39	.34						.02			2.15
Meridian	Chic'sawhay	.08	T.																		T.	.39	.84	.03					T.	.03		.01	1.38
Merrill ‖	Pascagoula	2.00	.78	.10												.06					.20		1.40		.08								4.62
Monticello	Pearl	.69	.11	.10														.18	.02	T.	.15	.59	T.										1.84
Okolona ‖	Tombigbee	.51																			.22	.30	.25									.12	1.40
Pascagoula	Coast	.78	.02	.38																	1.15	.92	.06		.20								3.51
Pearlington	Pearl	1.22		.33																T.	T.	1.37	T.										2.92
Porterville	Tombigbee	.50																	T.		.15	.11	1.23									.40	2.39
Shubuta ‖	Chic'sawhay	.74	.10	.04															.02	.88		1.58		.46									3.82
Waynesboro ‖	do	1.96	.15	T.															T.	.12	T.	.40	T.	.28	T.					T.			2.91
Woodland	Tombigbee	.73																				1.12	.71	.12									2.68

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations, May, 1911. District No. 2, South Atlantic and east Gulf States.*

Date.	Virginia.								North Carolina.																		Charleston, S. C.	
	Lynchburg.		Norfolk.		Richmond.		Saxe.		Charlotte.		Edenton.		Fayetteville.		Hatteras.		Newbern.§§		Raleigh.		Reidsville.		Salisbury.		Wilmington.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	80	63	83	64	83	66	82	62	75	63	80	70	84	63	73	64	85	59	81	63	81	62	78	64	81	66	78	68
2....	68	45	72	52	72	46	70	55	74	55	82	72	80	66	77	61	83	64	73	50	75	49	77	50	83	66	86	66
3....	66	35	62	48	63	33	64	34	66	44	80	70	66	45	62	50	64	45	64	43	69	38	76	42	68	50	70	57
4....	65	47	60	48	63	44	68	35	70	47	75	45	72	43	62	55	68	45	66	43	68	44	76	42	64	52	69	58
5....	66	47	61	49	66	46	60	33	58	48	72	40	67	48	64	57	65	49	63	47	64	45	63	48	66	53	70	58
6....	70	39	63	52	69	43	70	35	68	44	75	40	71	44	62	55	61	46	68	45	71	40	71	40	57	49	68	55
7....	77	38	62	58	71	46	74	35	72	46	70	40	73	42	58	51	58	46	69	45	75	42	76	41	61	48	72	52
8....	62	50	54	49	59	48	64	49	62	53	65	35	58	51	63	50	63	44	59	48	63	49	69	49	60	51	67	50
9....	76	53	72	50	77	53	87	48	77	50	61	48	84	52	71	53	77	47	78	51	75	47	80	48	82	52	87	60
10....	88	52	82	59	85	57	88	49	89	57	80	50	92	55	79	60	87	48	88	59	89	52	89	51	85	57	80	64
11....	91	54	87	61	91	64	91	64	91	65	80	60	95	57	78	63	88	53	92	63	83	59	93	62	83	62	78	67
12....	92	64	88	65	91	62	91	64	92	66	86	63	94	65	76	65	87	62	91	66	93	59	92	62	83	65	82	70
13....	83	62	82	67	79	66	77	66	80	57	84	64	89	61	76	64	87	60	84	60	81	63	89	59	81	61	77	63
14....	76	58	69	56	74	56	79	58	78	55	76	56	81	59	77	62	84	59	78	62	79	57	80	56	78	62	77	61
15....	79	48	74	54	80	50	80	46	82	57	76	49	86	54	72	62	79	55	81	53	82	51	83	55	76	61	76	68
16....	89	54	85	60	87	56	87	48	88	61	80	50	93	57	77	63	88	54	86	60	89	59	86	64	79	62	77	60
17....	93	59	85	67	92	62	94	64	92	66	85	58	95	64	78	68	92	62	91	66	95	61	94	64	87	66	79	68
18....	93	65	91	70	95	66	94	69	92	68	90	60	96	66	75	68	93	63	92	69	96	66	94	66	85	67	80	68
19....	93	65	94	73	95	70	92	65	90	65	88	65	95	65	77	68	92	64	90	67	92	66	90	65	85	66	81	61
20....	91	60	92	70	91	68	92	58	88	66	88	66	94	64	79	67	89	62	89	67	91	65	89	65	85	68	80	73
21....	89	62	90	68	90	66	90	58	88	67	86	67	91	64	79	67	87	63	87	65	90	62	88	64	81	65	78	73
22....	90	63	89	69	91	68	90	60	88	65	87	66	90	64	80	68	87	61	88	65	90	63	88	61	82	66	79	73
23....	87	67	91	69	91	68	92	66	82	66	88	66	92	63	81	70	90	62	88	66	88	64	89	63	84	69	81	71
24....	89	69	80	67	86	68	91	67	89	66	82	68	90	68	82	66	84	64	89	68	95	65	92	66	83	68	83	71
25....	89	59	84	67	87	63	90	55	88	66	80	67	93	65	81	65	90	64	88	68	93	62	92	59	92	68	90	70
26....	88	62	74	60	82	61	88	56	95	71	73	63	98	63	83	64	91	61	92	62	94	66	99	66	93	66	93	71
27....	79	61	72	60	79	58	82	56	83	64	68	55	83	61	71	61	82	57	80	60	84	60	98	62	80	62	79	70
28....	84	58	72	60	84	58	86	52	85	62	78	55	88	58	68	62	81	55	85	60	88	58	95	60	84	60	82	67
29....	86	57	77	60	83	59	85	50	86	62	81	55	88	64	76	63	80	58	82	60	89	60	90	64	79	63	82	66
30....	87	59	83	64	86	58	90	55	89	64	85	59	90	62	78	68	86	62	87	62	89	59	91	58	81	64	81	68
31....	89	64	88	66	89	65	92	64	91	67	85	63	93	62	79	66	87	60	89	64	93	64	92	64	82	65	81	69
Mns..	82.4	56.1	77.9	60.5	81.6	58.0	83.4	53.9	82.2	59.8	79.5	57.6	85.8	58.5	74.0	62.1	81.8	56.6	81.9	58.9	84.0	56.7	85.8	57.4	79.0	61.3	78.8	65.6

Date.	South Carolina.														Georgia.													
	Columbia.		Conway.§§		Ferguson.§§		Georgetown.		Greenville.§§		Newberry.		Society Hill.		Albany.§§		Atlanta.		Augusta.		Dahlonega.		Macon.		Rome.§§		Savannah.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	77	66	88	62	83	74	75	58	.....	.....	76	66	78	63	84	65	68	60	79	67	80	63	77	64	81	60	85	64
2....	78	62	86	65	76	65	74	55	.....	.....	80	60	80	48	76	63	64	49	76	63	67	50	73	58	67	49	84	66
3....	68	50	67	51	73	53	76	56	.....	.....	71	50	65	46	69	57	68	46	68	55	69	44	69	55	74	43	68	57
4....	72	48	73	51	71	50	78	59	.....	.....	76	45	71	49	77	57	73	54	74	50	72	46	76	52	75	43	71	56
5....	67	51	71	53	70	52	70	53	.....	.....	66	55	67	47	79	56	68	50	69	54	65	50	69	55	74	45	71	56
6....	71	48	69	50	75	49	72	54	.....	.....	74	44	70	44	77	53	70	47	72	48	69	44	71	49	71	41	69	52
7....	74	43	73	46	71	45	75	56	.....	.....	76	42	73	43	78	50	74	52	76	46	74	43	75	46	80	40	73	49
8....	70	50	72	43	87	39	76	58	.....	.....	72	50	63	48	85	48	77	54	78	54	77	44	80	51	85	42	74	52
9....	86	51	87	52	92	45	77	55	.....	.....	88	43	81	53	89	51	81	57	86	49	83	49	86	48	90	45	87	55
10....	92	62	92	52	96	54	86	52	.....	.....	94	55	85	59	95	57	85	64	92	59	89	56	90	57	92	55	87	66
11....	95	66	87	55	92	58	86	63	.....	.....	96	60	91	65	95	59	88	65	93	63	89	54	91	59	94	54	90	67
12....	94	66	86	62	88	62	85	67	.....	.....	97	63	91	47	94	62	88	67	94	65	90	58	94	61	92	54	84	67
13....	83	61	86	60	84	60	84	61	.....	.....	91	68	86	58	91	67	90	63	82	64	87	59	86	62	92	56	80	64
14....	83	56	81	57	84	58	77	60	.....	.....	86	56	84	59	89	66	83	57	84	59	80	52	83	59	89	55	76	59
15....	84	62	82	64	86	63	78	60	.....	.....	85	55	83	60	82	61	81	61	84	65	79	62	82	64	88	60	75	67
16....	87	62	84	63	90	65	82	67	.....	.....	88	60	88	66	89	67	82	62	84	64	85	61	86	65	91	57	79	67
17....	91	66	89	64	87	64	84	65	.....	.....	95	64	92	67	91	69	87	67	88	66	90	61	87	67	98	61	81	67
18....	92	66	89	65	92	62	86	67	.....	.....	95	65	92	62	89	67	90	68	89	65	90	62	88	67	98	63	81	68
19....	88	67	89	63	91	64	84	66	.....	.....	92	63	90	65	86	69	81	67	86	67	82	64	85	69	90	65	81	70
20....	89	69	87	62	89	63	85	67	.....	.....	90	67	90	63	89	69	81	65	88	69	81	67	84	69	82	68	81	70
21....	88	65	84	62	87	62	82	65	.....	.....	92	62	89	62	82	69	79	66	89	66	79	64	86	69	84	65	80	70
22....	87	64	85	62	90	61	83	65	.....	.....	91	64	88	65	89	69	78	66	88	67	78	66	83	65	85	65	79	70
23....	87	67	86	62	86	60	84	64	.....	.....	89	68	88	67	85	72	82	66	87	69	78	63	78	68	88	65	82	70
24....	86	68	90	64	95	65	85	68	.....	.....	93	69	86	66	87	69	87	63	86	70	85	56	87	69	89	61	82	70
25....	93	67	97	64	99	65	92	68	.....	.....	94	64	90	64	93	69	90	68	94	69	90	63	93	65	93	61	90	67
26....	90	66	99	58	89	60	95	66	.....	.....	101	63	97	64	98	68	94	69	97	66	92	65	97	65	97	64	96	70
27....	88	65	87	63	93	63	82	65	.....	.....	93	64	85	61	98	69	93	70	92	70	94	62	93	69	97	64	83	71
28....	89	64	88	60	88	61	83	64	.....	.....	91	63	87	60	92	71	90	69	89	67	90	66	90	70	97	64	85	65
29....	89	61	88	58	90	56	82	67	.....	.....	92	60	86	63	94	71	90	69	90	68	89	62	91	69	96	65	85	65
30....	89	63	88	64	93	63	83	65	.....	.....	94	60	88	62	93	65	89	68	90	64	89	60	91	64	95	64	83	66
31....	92	67	87	62	81	61	84	66	.....	.....	97	64	91	67	98	68	91	70	93	67	90	60	95	70	99	64	85	68
Mns..	84.8	60.9	84.4	58.7	86.1	62.2	81.5	62.0	.....	.....	87.6	59.1	83.7	59.1	87.5	63.6	82.0	61.9	85.0	62.4	82.4	57.3	84.4	61.9	87.8	56.7	80.9	64.2

TABLE 3.—*Maximum and minimum temperatures at selected stations, May, 1911. District No. 2*—Continued.

Date.	Georgia.						Florida.																			
	Thomasville.		Waycross. §§		West Point. §§		Avon Park.		Fort Myers.		Gainesville. §§		Jacksonville.		Key West.		Miami.		Ocala. §§		Orlando.		Pensacola.		Tallahassee. §§		Tampa.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	84	64	87	62	69	65	91	61	85	63	85	61	85	66	83	73	86	70	90	62	89	62	73	66	83	63	82	66
2	86	65	87	68	73	52	93	64	87	67	88	66	87	68	83	76	88	71	90	63	91	66	78	59	85	66	84	69
3	67	56	71	58	73	52	90	67	88	68	72	67	72	60	84	75	89	72	80	65	85	70	65	57	64	54	86	68
4	78	55	76	57	79	51	75	67	78	69	65	57	68	60	83	67	86	67	71	59	77	66	78	57	76	52	71	64
5	80	53	80	54	71	53	82	65	78	67	76	58	70	60	82	71	82	61	86	58	81	64	77	59	80	57	82	61
6	77	56	78	54	73	48	79	67	81	67	75	60	67	61	75	68	77	68	82	61	75	67	75	63	77	58	79	62
7	77	50	78	49	78	44	79	64	82	65	76	55	72	55	80	71	82	66	78	55	78	61	76	61	77	55	81	60
8	86	46	84	44	83	45	82	58	83	59	82	48	81	52	79	69	80	63	86	48	80	53	81	65	84	52	83	55
9	90	54	90	52	88	48	87	51	85	56	88	55	87	59	81	70	84	67	88	57	86	51	79	64	87	55	81	63
10	94	60	94	58	91	54	90	54	88	58	92	58	92	64	82	68	85	61	93	61	89	56	79	65	89	58	84	64
11	93	60	95	60	82	55	90	58	89	60	94	59	92	66	82	70	84	59	94	63	87	61	77	67	91	60	92	64
12	94	59	96	64	92	56	87	59	88	60	92	63	86	64	82	70	84	71	96	60	86	60	84	64	90	64	89	66
13	91	62	97	60	94	60	87	63	90	67	90	61	81	63	82	72	85	73	94	59	81	66	92	71	89	64	88	64
14	86	65	86	62	85	61	82	63	87	67	86	63	79	64	82	71	81	65	95	63	80	68	79	71	86	63	86	65
15	82	65	78	65	84	62	88	66	83	66	85	65	79	69	83	69	84	66	83	66	82	72	83	71	84	68	84	66
16	88	67	85	67	84	62	79	67	79	66	82	68	82	69	83	72	82	65	85	68	81	72	79	70	88	67	84	67
17	89	68	87	68	90	63	81	68	81	68	84	67	82	69	83	71	76	69	85	66	78	71	80	71	86	67	84	67
18	84	67	85	67	91	64	79	69	80	65	83	69	80	69	84	72	78	69	83	69	77	71	80	72	83	68	81	69
19	84	68	88	69	85	68	83	65	81	67	89	67	80	67	84	75	85	72	89	65	79	69	80	68	84	68	83	67
20	85	67	89	69	89	68	88	63	87	64	86	67	83	70	86	68	85	70	89	66	85	66	80	68	85	67	86	64
21	77	68	88	67	83	68	84	70	87	69	85	61	81	70	84	74	86	70	87	70	84	73	79	73	80	67	84	69
22	80	68	86	70	81	67	83	69	86	67	81	68	83	72	84	77	86	76	86	70	81	72	80	72	80	68	82	71
23	87	68	91	68	88	64	87	69	87	67	86	67	84	71	83	75	85	74	88	67	85	70	82	71	81	69	88	70
24	88	69	97	69	92	63	87	67	86	68	89	66	84	70	85	75	85	74	88	67	85	67	85	72	88	69	88	69
25	90	67	91	63	94	62	88	69	87	69	86	65	86	66	83	73	84	70	90	65	86	68	90	72	86	67	88	69
26	95	69	98	66	98	63	90	64	89	68	93	63	91	69	84	74	85	71	93	61	87	65	88	76	92	69	90	68
27	97	70	97	71	98	67	93	64	90	70	97	68	90	73	84	73	86	70	96	65	92	64	92	74	94	71	89	68
28	90	69	92	65	96	71	88	67	92	73	89	70	82	68	85	73	86	68	97	63	89	74	84	76	88	70	91	72
29	93	66	94	60	97	71	87	65	90	67	92	62	89	64	85	76	88	73	92	59	88	69	85	73	90	68	89	66
30	90	62	93	60	96	64	90	63	89	68	91	63	83	64	85	74	89	67	93	62	86	70	90	73	90	65	88	71
31	94	65	94	61	97	66	90	63	88	68	92	63	85	66	85	76	88	68	91	63	86	69	87	77	92	68	89	68
Mns..	86.3	62.8	88.1	62.2	86.3	59.9	85.8	64.2	85.5	65.9	85.5	62.9	82.0	65.4	82.9	72.2	84.2	68.6	88.3	62.8	83.7	66.2	81.2	68.5	84.8	63.8	85.0	66.2

Date.	Alabama.																Mississippi.							
	Anniston.		Bermuda.		Birmingham.		Eufaula. §§		Mobile.		Montgomery.		Tuscaloosa. §§		Uniontown.		Columbus. §§		Hattiesburg. §§		Jackson.		Meridian.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	75	57	75	65	76	54	75	58	75	66	73	63	80	65	73	66	78	66	82	55	79	65	79	57
2	65	46	74	50	65	46	73	53	76	58	72	54	68	48	72	50	65	46	72	54	70	49	68	49
3	72	47	72	55	73	45	67	53	66	57	72	55	72	48	74	53	72	48	78	54	74	50	70	51
4	74	45	78	52	73	48	76	51	79	57	76	55	70	58	79	61	74	48	76	51	75	49	73	50
5	73	49	74	51	72	47	74	50	76	58	73	53	75	50	75	52	72	47	76	52	72	51	72	52
6	73	50	75	46	74	51	75	48	78	58	74	53	77	47	76	51	75	45	78	47	78	44	74	50
7	77	43	78	45	78	49	76	43	80	56	78	50	80	47	82	52	80	46	82	47	81	47	77	47
8	80	43	83	46	80	49	82	45	83	58	82	54	84	46	83	51	82	46	86	48	83	47	81	48
9	84	46	85	49	83	54	85	47	83	62	84	58	88	47	85	58	86	49	90	51	85	51	84	51
10	87	53	88	52	85	61	89	50	80	64	86	61	88	48	85	60	88	52	88	53	85	52	85	55
11	87	56	86	50	84	62	88	55	80	64	86	63	88	54	85	57	87	55	86	56	86	56	83	58
12	88	54	89	53	84	61	90	56	84	60	86	64	89	56	87	60	88	58	90	57	90	66	87	60
13	90	56	91	58	89	59	89	58	89	66	91	64	92	56	91	61	91	58	91	59	90	60	89	58
14	84	57	87	61	85	63	85	59	82	67	85	65	91	58	86	66	90	62	92	60	92	61	88	63
15	83	66	87	65	85	63	82	64	88	67	84	67	88	68	86	64	88	60	90	61	88	60	86	61
16	84	63	90	62	82	65	88	63	85	69	84	66	89	63	86	65	92	63	93	60	90	68	86	66
17	91	63	89	65	89	67	90	67	85	70	89	67	94	63	90	66	93	63	93	64	92	64	90	64
18	90	64	89	64	90	69	90	63	83	70	88	68	94	63	91	65	93	65	90	63	90	67	87	67
19	84	67	82	68	78	68	85	67	82	71	80	68	89	69	83	65	90	68	92	64	89	68	88	68
20	84	66	79	68	83	64	83	67	79	67	86	69	82	69	81	69	84	71	84	65	82	69	79	68
21	84	66	86	63	84	64	84	68	81	67	87	68	80	62	84	66	86	67	83	63	83	61	83	66
22	82	65	88	65	83	66	83	66	82	69	86	67	80	62	84	68	83	67	88	64	87	66	84	66
23	84	63	89	64	83	64	82	68	89	69	86	66	88	62	86	66	88	64	92	66	92	60	86	65
24	87	60	89	65	88	62	90	66	91	70	89	67	93	62	91	64	91	61	92	66	92	60	89	64
25	90	60	91	63	91	63	93	61	93	71	93	68	94	63	93	66	93	68	94	63	95	61	91	63
26	93	62	94	62	92	67	95	62	90	74	96	70	94	63	95	67	97	65	96	65	92	64	95	64
27	94	63	96	65	94	67	97	64	90	71	96	71	99	66	96	71	100	68	96	64	98	61	95	67
28	91	68	96	68	93	70	93	66	94	74	95	74	99	68	95	73	100	69	100	67	100	66	95	70
29	93	66	92	66	92	69	94	67	92	75	94	72	99	69	96	66	99	69	101	68	99	68	98	68
30	91	63	95	65	94	67	94	60	97	73	95	69	99	66	99	66	98	60	102	69	99	67	96	69
31	95	65	95	66	94	72	97	62	93	76	98	70	100	68	98	66	99	69	101	67	98	66	96	68
Means	84.2	57.8	85.9	59.3	83.8	60.5	85.3	59.3	84.0	66.3	85.3	63.8	87.2	59.2	86.0	62.3	87.2	59.7	88.8	59.8	87.3	59.5	85.0	60.4

[a], [b], [c], etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT No. 3, OHIO VALLEY.

FERDINAND J. WALZ, District Editor.

GENERAL SUMMARY.

Following an unusually wet and cold April, unseasonably warm and dry weather largely prevailed during May, 1911, over the entire Ohio Valley. When the month began a general rainstorm was in progress, which, passing over during the 1st, was succeeded by nearly a week of unusually cold weather, during which freezing temperatures and frost occurred more or less generally every night, and snow fell in Ohio, Pennsylvania, and West Virginia on the 2d and 3d. The cold weather terminated near the close of the first decade and very warm weather quickly set in, the average daily temperature of the period 9th–12th being 20° to 30° higher than that of the period 2d–6th. Intense midsummer heat was experienced almost daily during the last half of the month, and as a whole it averaged among the warmest Mays on record in all sections, and the warmest in several. The skies were remarkably clear during nearly all of the month; there were only a few general rains, and sufficient rainfall, even locally, was rare. Much suffering and many prostrations and deaths resulted from the intense heat, while the heat, combined with lack of moisture, caused serious damage to all vegetation.

Thunderstorms, despite the small amount of precipitation, were decidedly frequent, and there were many reports of local damage from lightning and accompanying wind squalls, although most of the storms were attended by only light showers of rain. There were a few instances of minor damage by hail.

TEMPERATURE.

The average temperature of the month was above normal at all stations in the district, and much above in most of the sections. The excess averaged from +2° to +8°, and, as a rule, the departure was greater in the central and more northerly than in the more southerly sections.

When the month opened rather high temperature obtained over the greater portion of the district. But a cool wave which was advancing from the Northwest made itself felt in the western section during the first day, and had spread over all the district by the morning of the 2d. This cool wave, which was unusually severe for the season, lasted for nearly a week and during its prevalence freezing temperatures and frost occurred in all parts of the district except in the extreme southern portion. The following unusually low temperatures for May were registered in the various States included in the district: Pennsylvania, 21°; West Virginia, 22°; Ohio, 25°; Indiana, 27°; Illinois, 30°; Kentucky, 29°; Tennessee, 29°; North Carolina, 26°; and southwestern Virginia 23°, while at Deer Park, Md., a minimum temperature of 19° was reached on the morning of 5th. No material damage resulted from the frost and cool weather due to the fact that vegetation generally had been much retarded by the cool weather in April.

About the 9th there was a quick reaction and unseasonably cool was succeeded by unseasonably warm weather, which continued during the rest of the month. From the 15th to practically the end of the month there persisted one of the most remarkable periods of continuously hot weather on record for May. Day after day the temperature rose well into the 90's at nearly all stations, and on several days it was 100° and over at several of the stations, while the average daily temperatures ranged from 4° to 18° above the seasonal normal. The highest temperatures registered in the various States included in the district during the month were as follows: Claysville, Pa., 99°; Wheeling, W. Va., 100°; Marion and Urbana, Ohio, 101°; Blacksburg, Va., 91°; Marshall, N. C., 95°; Riverton, Ala., 101°; Pope, Tenn., 101°; Earlington, Ky., 105°; Rome, Ind., 103°; and Golconda, Ill., 101°. These records have been rarely if ever exceeded in these States in the month of May. There was a range of temperature in the district during the month of 86°, from 19° at Deer Park, Md., on the 5th, to 105° at Earlington, Ky., on the 28th, which has never been exceeded, as far as records show, in the Ohio Valley in the month of May.

PRECIPITATION.

The month opened with a general rainstorm in progress over the district and bountiful precipitation was received generally, except that the amount was light in the more southerly portions of the district. Following this general rainstorm, rain was very scarce for a period of nearly three weeks, or until the 20th, during which time there were only a few scattered showers, mostly light. In the period 20th–23d some good rains occurred, but following these the weather was again dry until the 31st, when a general rainstorm was attended by moderate amounts of precipitation over Kentucky, Indiana, Ohio, and the eastern portions of the district, and light precipitation occurred in Illinois and over the southern portions of the district.

Precipitation for the month was much below normal in nearly all sections of the Ohio Valley. In fact, there were only 10 stations in the whole district where the monthly amounts equaled those which usually occur in May. The greatest monthly amount at any station was 5.50 inches at Owensboro, Ky.; but at several stations in the central and eastern portions of the same State the monthly amounts were considerably less than 1 inch. The monthly amounts received in the various parts of the district were from 3 to 5 inches over limited areas in southeastern Indiana, west central and southern Kentucky, and west central Tennessee, and less than 3 inches over practically all the rest of the district. At a large number of stations the amounts were less than 2 inches and at quite a few less than 1 inch. In consequence of

this very light rainfall during an important growing season of the year, there was general suffering from lack of moisture, which had become pronounced as early as the 15th and by the end of the month drought had become serious. The ground was dry and hard, vegetation was parched, and crops that had been planted were mostly famishing for want of water. Streams and water sources were unusually low and even stock water was getting scarce.

MISCELLANEOUS.

Considering the small number of days with rain, thunderstorms were unusually frequent. Quite a number of these storms were attended by damaging lightning and wind squalls in Kentucky, Indiana, Ohio, Pennsylvania, and West Virginia. Numerous instances of death from lightning were reported from various localities in these States. The most important of these storms were as follows:

May 1.—Local storms, with tornadic characteristics, did a great deal of damage at Uniontown, Smithfield, and in Somerset County, Pa., and in Allegany and Cattaraugus County, N. Y. One man was killed at Maplehurst, near Cuba, N. Y. Many houses and barns were injured or destroyed in the counties visited by these storms and many head of cattle and other stock were killed.

May 10.—There was considerable damage by thunderstorms in the lower Allegheny Valley, Pa. One boy was killed and another injured by lightning while standing under a tree near New Kensington, Pa. At Greensburg, Pa., a semipanic was caused when a severe electric storm and wind squall swept over that town during the afternoon performance of the Barnum & Bailey circus, blowing down portions of the tents and sections of seats.

May 11.—Young lambs, pigs, and goats were killed and plant beds and wheat injured by mammoth hailstones at Smith Grove, Ky. A man and colt were killed and a house damaged by lightning in Delaware County, Ohio.

May 20, 21, and 22.—Numerous instances of local damage from lightning in Kentucky, Ohio, and Indiana were reported in the newspapers. One man and six Jersey cows were killed by the same bolt of lightning in Oldham County, Ky.

May 30.—In Indiana, three persons were killed, one at Madison, one near Columbus, and one near Fortville, beside a number of others were shocked by lightning attending thunderstorms in various places on the night of the 30th.

May 31.—Thunderstorms were destructive in many localities in Pennsylvania, Ohio, West Virginia, Kentucky, and Indiana. Two persons were killed, many injured, and much property was damaged in and about Pittsburg, Pa., by a wind squall which reached a velocity of 64 miles per hour in that city. A storm was also destructive in McKean County, Pa. A young woman was killed by lightning at Cameron, W. Va., and several persons were reported killed at places in Ohio. A man was killed at Nicholasville, Ky., and 25 head of sheep on a farm near Millersburg, Ky. A large barn, with contents, was struck by lightning and burned near Petersburg, Ind.

TABLE 1.—*Climatological data for May, 1911. District No. 3, Ohio Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York.																				
Allegany	Cattaraugus	1,441	5	60.2	.....	92	28	22	4†	48	3.00	.....	0.65	0.7	12	20	7	4	nw.	Charles E. Whitney.
Bolivar	Allegany	1,800	17	62.0	+ 6.4	95	22	20	4†	50	4.23	+ 0.21	1.43	T.	11	11	14	6	sw.	B. O. Newton.
Olean	Cattaraugus	.....	3	.....	.....	.....	.....	.....	.....	.....	2.46	.....	0.80	0	8	20	7	4	w.	John W. Alles.
Pennsylvania.																				
Aleppo	Green	1,135	10	65.5	+ 4.5	94	28†	28	5	48	1.83	− 1.99	0.79	0	3	22	8	1	sw.	J. S. Hinerman.
Baldwin	Butler	1,404	5	64.6	.....	92	28	27	4	43	1.69	.....	0.48	0	7	14	10	7	w.	S. H. Templeton.
Beaver Dam	Beaver	674	17	.....	.....	.....	.....	.....	.....	.....	0.60	− 2.50	0.25	0	7	15	7	9	sw.	R. C. McCullough.
Brookville	Jefferson	1,173	0	64.2	.....	98	29	27	4	53	0.77	.....	0.38	0	8	.....	.....	.....	w.	H. C. Bartholomew.
Clarion	Clarion	1,078	26	.....	.....	.....	.....	.....	.....	.....	0.89	− 3.44	0.52	0	5	18	4	9	w.	J. A. Miller.
Claysville	Washington	1,127	7	66.9	.....	99	19	28	5	48	2.40	.....	0.95	T.	6	17	11	3	w.	E. T. Buchanan.
Confluence	Somerset	1,352	27	.....	.....	.....	.....	.....	.....	.....	1.17	− 2.97	0.35	0	5	16	7	8	w.	Grant Pyle.
Franklin	Venango	955	37	62.8	+ 4.4	97	29	25	5	40	1.32	− 2.03	0.45	T.	8	18	8	5	w.	F. E. Dixon.
Freeport	Armstrong	772	38	.....	.....	.....	.....	.....	.....	.....	0.61	− 3.34	0.18	0	7	17	5	9	.....	Mrs. Anna R. Burtner.
Greensboro	Green	768	22	.....	.....	.....	.....	.....	.....	.....	0.96	− 3.26	0.32	0	4	14	11	6	se.	James Kramer.
Greenville	Mercer	950	15	63.5	+ 5.8	95	28	23	5	45	2.00	− 1.39	0.45	T.	9	23	5	3	nw.	A. M. Orr.
Indiana	Indiana	1,350	14	66.6	+ 6.9	98	28	26	5	43	0.55	− 3.85	0.35	0	2	18	10	3	s.	R. W. Wehrle.
Johnstown	Cambria	1,184	23	67.3	+ 6.0	97	28†	29	5	45	4.22	− 0.11	2.85	T.	10	15	15	1	s.	E. C. Lorentz.
Lock No. 4	Washington	718	25	.....	.....	.....	.....	.....	.....	.....	1.93	− 1.92	0.86	0	4	14	14	3	s.	R. T. McGowan.
Lycippus	Westmoreland	1,420	19	[illegible]	+ 6.3	91	28†	33	3	37	1.46	− 2.50	0.45	0	6	.....	.....	.....	.....	Murray Forbes.
Pittsburg	Allegheny	842	41	68.0	+ 5.4	93	22	34	3	35	0.42	− 2.88	0.28	T.	3	16	12	3	nw.	U. S. Weather Bureau.
Saegerstown	Crawford	1,116	20	61.7	+ 4.7	93	28	21	5	47	2.88	− 1.87	0.55	T.	16	13	14	4	nw.	J. G. Apple.
Skidmore	Lawrence	1,000	7	63.4	.....	95	28	25	5	45	1.00	.....	0.65	0	2	29	1	1	s.	W. H. Stoner.
Somerset	Somerset	2,250	55	63.2	+ 6.3	93	22	25	5	43	3.86	− 1.51	0.86	0	7	6	19	6	nw.	W. M. Schrock.
Uniontown	Fayette	999	23	66.0	+ 4.3	95	19	30	5	41	1.81	− 2.58	1.04	T.	4	17	8	6	sw.	Wm. Hunt.
Warren	Warren	1,137	22	60.8	+ 4.1	92	28†	24	3	41	2.23	− 2.56	1.30	1.8	8	22	9	0	nw.	Anna Simpson.
Maryland.																				
Deer Park	Garrett	.....	17	60.0	+ 3.4	90	11†	19	5	56	1.09	− 3.54	0.53	1.2	4	.....	.....	.....	.....	S. P. Specht.
Grantsville	....do	.....	17	61.6	+ 4.3	88	21†	26	5	39	0.98	− 3.14	0.50	0	5	.....	.....	.....	.....	J. S. Miller.
Oakland	....do	.....	11	59.7	+ 4.3	89	21†	21	5	45	2.09	.....	0.76	T.	10	19	10	2	w.	R. E. Weber.
West Virginia.																				
Bancroft	Putnam	574	10	68.3	.....	95	21	32	3	41	1.39	− 2.71	1.00	0	5	24	3	4	nw.	James Hill.
Beckley	Raleigh	2,440	12	62.4	+ 3.0	88	19	29	3†	42	1.70	− 1.11	1.00	0	3	23	1	7	w.	John A. Ewart.
Bens Run	Pleasants	622	10	68.9	+ 5.9	98	20	34	4†	42	1.38	− 3.93	0.78	0	3	27	2	2	.....	J. D. Riggs.
Bluefield	Mercer	2,563	17	66.2	+ 4.1	89	19	30	2	44	0.81	− 3.61	0.55	0	5	22	7	2	.....	Norfolk & Western Ry.
Buchannon	Upshur	1,472	20	64.0	+ 1.7	92	19†	28	3†	41	1.47	− 2.99	0.82	0	7	21	7	3	.....	H. A. Darnall.
Cairo	Ritchie	667	10	66.5	+ 2.5	97	20†	28	3	44	1.04	− 2.63	0.40	0	4	9	21	1	sw.	Van A. Zevely.
Central Station	Doddridge	900	11	64.2	+ 2.5	94	19†	24	5	48	1.64	− 2.13	0.85	0	4	17	10	4	sw.	G. W. Sherwood.
Charleston	Kanawha	598	24	70.1	.....	94	19†	34	3	37	1.05	− 3.06	0.45	0	3	24	5	2	w.	R. C. Hewes.
Creston	Wirt	612	11	68.0	+ 5.2	98	19†	29	3	46	0.83	− 2.86	0.45	0	3	18	9	4	w.	J. M. Reed.
Cuba	Jackson	544	10	66.1	+ 3.1	94	19†	28	3	44	1.18	− 2.38	0.46	0	6	16	13	2	w.	C. T. Perry.
Elkhorn	McDowell	1,933	19	65.4	+ 2.8	91	19	33	6	38	1.50	− 2.94	1.25	0	2	16	14	1	w.	J. J. Lincoln.
Elkins	Randolph	1,940	13	63.0	+ 3.9	92	21	28	5	39	2.23	− 1.75	0.87	T.	9	16	8	7	w.	U. S. Weather Bureau.
Fairmont	Marion	879	18	67.7	.....	100	20	29	3†	47	1.28	− 2.81	0.53	0	6	.....	.....	.....	.....	H. Glenn Fleming.
Glenville	Gilmer	738	22	68.2	+ 5.2	99	20	29	3†	46	0.75	− 3.46	0.26	0	3	9	10	12	sw.	John Holt.
Grafton	Taylor	985	18	66.2	+ 4.5	98	21	28	5	48	1.47	− 2.92	0.54	0	5	23	6	2	.....	John W. Snider.
Green Sulphur Springs	Summers	1,600	16	64.6	+ 3.1	92	19	27	3	43	1.51	− 2.14	0.45	0	8	11	17	3	w.	Arthur George.
Hinton	....do	1,400	21	66.8	+ 2.7	95	19	30	3	47	1.28	− 2.75	0.68	0	5	25	1	5	w.	J. B. Lavender, C. E.
Huntington	Cabell	510	17	69.0	+ 4.4	93	19†	36	5	36	0.90	− 3.11	0.42	0	5	25	0	6	w.	L. H. Hutchinson.
Lewisburg	Greenbrier	2,200	11	63.4	+ 2.8	90	19†	27	3	39	1.39	− 2.66	0.53	0	7	28	3	0	w.	Geo. T. Argabrite.
Logan	Logan	665	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. C. Ragland.
Lost Creek	Harrison	1,033	15	64.0	+ 3.1	95	20	24	5	47	0.40	− 4.25	0.22	0	5	25	2	4	w.	Allen Smith.
Madison	Boone	704	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. E. Bradley.
Mannington	Marion	967	10	64.4	.....	93	19†	29	3†	44	1.69	.....	0.79	0	5	22	5	4	n.	Jas. A. Morgan.
Marlington	Pocahontas	2,169	17	61.2	+ 1.8	91	29	22	3†	50	1.35	− 2.84	0.81	0	5	23	8	0	.....	C. J. McCarty.
Morgantown	Monongalia	1,250	36	68.2	+ 6.1	93	19	32	5	40	1.79	− 1.85	0.57	0	7	21	9	1	s.	Horace Atwood.
Moundsville	Marshall	640	10	67.6	+ 4.5	97	20†	31	5	46	1.22	− 1.92	0.55	0	6	21	5	5	nw.	M. L. Brown.
New Cumberland	Hancock	987	14	66.0	+ 5.6	97	28	28	5	47	0.87	− 2.58	0.50	0	3	20	5	6	s.	Frank S. Evans.
New Martinsville	Wetzel	634	18	68.0	+ 4.6	99	28	32	4	49	1.56	− 2.18	0.77	0	4	24	4	3	s.	Wm. Ankron.
Nuttallburg	Fayette	2,252	18	67.0[f]	+ 5.1	92[f]	21	22[f]	2	46[f]	1.90	− 1.67	1.20	0	3	21[e]	2[e]	3[e]	.....	Miss Donna Tully.
Parkersburg	Wood	638	23	69.1	+ 5.9	94	19	35	4	34	1.77	− 1.69	0.53	0	6	21	6	4	s.	U. S. Weather Bureau.
Parsons	Tucker	1,662	12	63.2	+ 4.1	94	21†	25	5	46	2.60	− 1.45	0.85	0	4	16	10	5	.....	J. W. Swisher.
Philippi	Barbour	1,192	18	65.6	+ 4.1	98	18†	27	5	48	1.13	− 3.24	0.41	0	8	16	14	1	w.	J. D. Dadisman.
Pickens	Randolph	2,785	20	63.3	+ 4.5	94	21	26	3	38	0.86	− 4.23	0.49	T.	5	23	4	4	w.	Dr. J. L. Cunningham.
Pineville	Wyoming	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. V. Senter.
Point Pleasant	Mason	553	21	68.9	+ 3.4	97	26	32	5	42	1.72	− 2.05	0.52	0	7	19	6	6	se.	W. D. Holmes.
Powellton	Fayette	904	14	69.2	+ 5.5	96	20†	31	3	43	1.94	− 2.28	1.50	0	5	18	10	3	.....	Morris Hansford.
Princeton	Mercer	2,469	10	60.4	+ 0.8	85	19	27	3	36	0.20	− 5.68	0.10	0	2	14	14	3	w.	H. Scott.
Robertsburg	Putnam	574	11	67.4	+ 3.1	97	19†	31	3†	45	0.96	− 2.51	0.37	0	6	23	0	8	.....	E. P. Turley.
Ryan	Roane	639	8	65.3	.....	95	26	27	3	51	1.31	.....	0.55	0	4	22	7	2	.....	Wm. E. Ryan.
Smithfield	Wetzel	919	8	66.4	.....	92	14	35	5	40	1.92	.....	0.94	0	3	22	5	4	sw.	G. M. Whisler.
Spencer	Roane	710	13	66.7	.....	99	19	29	5†	51	0.88	− 3.04	0.53	0	4	4	27	0	.....	A. M. McKown.
Sutton	Braxton	839	9	68.8[b]	.....	97[b]	20†	30[b]	2	52[b]	1.34	− 3.27	1.00	0	2	25	3	3	.....	J. E. Baughman.
Terra Alta	Preston	3,207	12	63.9	+ 5.3	90	19	28	3†	32	2.67	− 2.54	1.35	T.	4	25	4	2	sw.	C. F. Dodge.
Union	Monroe	.....	7	63.1	.....	90	19†	25	3	47	1.02	.....	0.70	0	5	.....	.....	.....	.....	Shelton Clark.
Valley Fork	Clay	.....	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Blanche Pierson.
Webster Springs	Webster	1,500	7	65.2	.....	94	22	27	3	42	2.00	.....	1.00	T.	4	11	15	5	sw.	D. H. Hamrick.
Wellsburg	Brooke	1,225	12	66.6	+ 6.3	91	19†	34	3	37	1.02	− 2.74	0.71	0	5	14	14	3	w.	C. P. Waugh.
Weston	Lewis	824	21	65.4[b]	+ 2.2	98[b]	19†	24[b]	4	42[b]	0.86	− 3.65	0.70	0	3	26	2	3	sw.	Miss C. M. Davis.
Wheeling	Ohio	645	26	68.4	.....	100	28	33	4†	52	0.79	− 2.84	0.35	0	7	24	3	4	sw.	Miss M. B. Forsyth.
Williamson	Mingo	660	11	69.6	+ 3.3	95	19	32	5	39	2.08	− 2.18	0.94	0	7	23	6	2	w.	J. F. Keyser.
Ohio.																				
Amesville	Athens	630	7	67.6	.....	99	26†	28	5	48	1.10	.....	0.63	0	3	24	7	0	nw.	F. W. Gibson.
Bangorville	Richland	1,380	24	66.1	+ 6.5	95	27	29	3	39	2.77	− 1.46	0.67	T.	9	10	18	3	sw.	S. M. Painter.
Bellefontaine	Logan	1,276	32	64.6	+ 4.1	97	28	29	3	40	2.01	− 1.43	0.62	T.	8	13	16	2	s.	Cory L. Lane.
Bladensburg	Knox	1,100	20	63.9[d]	+ 4.2	92[d]	28	25[d]	5	46[d]	.....	.....	.....	.....	.....	8	22	1	w.	Miss Mary Elliott.
Cadiz	Harrison	1,245	8	67.6	.....	96	28	32	3	42	1.28	.....	0.56	T.	4	21	7	3	ne.	Harry B. McConnell.
Cambridge	Guernsey	803	19	64.4	+ 3.7	91	26†	29	4†	47	1.76	− 1.76	0.81	0	4	15	15	1	.....	Samuel Mehaffey.
Camp Dennison	Hamilton	570	18	67.9	+ 3.9	98	28	31	4	40	1.88	− 2.49	0.73	0	10	18	11	2	sw.	Henry F. Pinkvoss.
Canal Dover	Tuscarawas	884	18	64.8	+ 4.4	93	22†	31	3†	44	0.96	− 2.58	0.34	T.	4	14	14	3	sw.	Ed. S. Slingluff.

TABLE 1.—*Climatological data for May, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Continued.																				
Canton	Stark	1,089	28	67.4	+ 7.7	95	28	33	5	39	1.38	− 2.61	0.71	T.	9	21	3	7	sw.	Carl H. Meyer.
Cardington	Morrow	1,010	16	64.6[e]	+ 4.4	99[e]	24	30[f]	4	48[f]	2.03	− 1.23	0.83	0	9	....	....	....	sw.	J. W. Shaw.
Chillicothe	Ross	630	8	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Marion Mackey.
Cincinnati	Hamilton	628	40	69.9	+ 4.8	95	27	36	2	31	1.54	− 1.98	1.17	0	7	12	15	4	w.	U. S. Weather Bureau.
Circleville	Pickaway	694	23	69.0	+ 5.8	98	26†	34	3†	41	1.00	− 2.60	0.60	T.	5	21	6	4	ne.	Hon. S. W. Courtright.
Clarington	Monroe	600	8	66.6	.....	97	26	30	4†	44	1.68	.....	1.00	0	6	18	10	3	se.	Col. S. Tschappat.
Columbus	Franklin	918	33	68.6	+ 6.3	94	28	33	2	36	1.15	− 2.57	0.32	T.	9	23	7	1	n.	U. S. Weather Bureau.
Coshocton	Coshocton	770	2	....	....	....	....	....	....	....	1.36	.....	0.45	0	6	....	....	....	....	Mrs. Ada Jeffries.
Dayton	Montgomery	790	30	67.6	+ 4.7	98	27†	33	4†	38	2.01	− 1.82	0.70	0	9	17	12	2	sw.	Mrs. Edith E. L. Boyer.
Delaware	Delaware	927	14	66.6	+ 6.0	97	27†	30	3	42	2.74	− 1.12	0.94	T.	9	21	8	2	sw.	Prof. L. L. Hudson.
Demos	Belmont	1,325	23	67.0[a]	+ 5.8	97[a]	28	31	3	41[a]	0.98	− 2.47	0.44	T.	7	23	6	2	s.	J. T. Dysart.
Dennison	Tuscarawas	846	1	66.5	.....	99	28	27	5	50	1.66	.....	0.93	0	5	22	8	1	s.	Water Supply Co.
Frankfort	Ross	750	19	68.6	+ 5.8	98	28	31	4	44	1.27	− 2.30	0.62	0	2	17	13	1	sw.	O. A. Cory.
Garrettsville	Portage	1,005	27	62.7	+ 5.8	95	28	25	5	43	3.04	− 0.77	1.07	0	8	16	11	4	w.	S. M. Luther.
Granville	Licking	960	29	66.6	+ 6.0	97	27†	31	5	42	1.08	− 2.52	0.35	T.	7	20	2	9	sw.	Dr. L. E. Davis.
Gratiot	.....do.....	1,000	22	64.9	+ 4.1	92	28	31	3†	40	1.54	− 2.02	0.88	T.	5	12	15	4	w.	W. B. Longstreth.
Green	Adams	500	18	67.7	+ 3.5	96	19	30	5	42	0.10	− 3.67	0.10	0	1	21	9	1	w.	W. F. Kenyon.
Green Hill	Columbiana	1,135	17	62.0	+ 3.9	92	28	25	5	44	0.63	− 2.59	0.32	0.1	4	21	9	1	sw.	Jos. E. Bentley.
Greenville	Darke	1,060	25	68.4	+ 7.7	98	27	33	2†	36	2.28	− 1.64	1.17	0	8	17	11	3	s.	Geo. A. Katzenberger.
Hillsboro	Highland	1,063	32	68.2	+ 6.0	96	26†	34	2†	40	1.63	− 1.84	0.98	T.	3	10	20	1	sw.	Carey H. Roush.
Ironton	Lawrence	575	28	68.4[b]	+ 5.0	96[b]	26	32[b]	5	40[e]	0.87	− 2.82	0.38	0	5	26	4	1	sw.	James Bull.
Jacksonburg	Butler	975	43	68.0	+ 5.5	98	28	32	3	39	1.93	− 1.71	1.25	0	6	19	9	3	sw.	Dr. J. B. Owsley.
Kenton	Hardin	1,015	19	64.4	+ 4.2	96	27†	29	3	42	2.04	− 2.00	0.66	0	6	20	8	3	w.	N. S. Martin.
Killbuck	Holmes	1,087	19	65.3	+ 4.8	94	28	30	3	42	2.50	− 1.14	1.00	T.	7	21	8	2	ne.	Lloyd C. Schonauer.
Lancaster	Fairfield	898	16	68.1	+ 5.8	96	27	34	4	38	1.26	− 3.05	0.39	0	5	27	3	1	sw.	R. L. Renshaw.
McConnelsville	Morgan	710	27	66.2	+ 4.2	94	26	32	4	40	1.55	− 2.26	0.56	T.	5	12	17	2	w.	C. H. Morris.
Marietta	Washington	627	91	69.4	+ 6.5	95	26	34	4†	41	2.73	− 1.14	0.83	0	7	16	13	2	n.	Prof. T. D. Biscoe.
Marion	Marion	980	33	67.8	+ 6.6	101	27	29	3	43	2.02	− 1.61	0.63	0	5	14	15	2	w.	Dr. E. H. Raffensperger.
Milfordton	Knox	1,200	19	64.8	+ 5.4	97	28	29	3	42	1.04	− 2.87	0.36	0	5	25	5	1	sw.	L. H. Burgess.
Milligan	Perry	875	18	65.0	+ 3.2	96	26	28	4†	46	1.18	− 2.21	0.58	0	4	17	13	1	nw.	V. C. Eveland.
Millport	Columbiana	1,145	18	63.3	+ 3.8	94	28	25	5	44	0.68	− 2.38	0.33	T.	4	13	15	3	sw.	G. F. Copeland.
Nellie	Coshocton	850	11	63.5	+ 2.1	94	28	29	5	41	1.95	− 1.64	0.45	0	6	19	11	1	w.	Miss Ethel L. Gamertsfelder.
New Alexandria	Jefferson	1,050	26	68.6	+ 7.2	97	28	30	5	46	2.45	− 1.19	1.75	T.	2	26	2	3	s.	Mrs. Mary K. Pennell.
New Berlin	Stark	1,100	18	64.2	+ 4.5	95	28	26	3	47	3.01	− 0.55	1.30	0	9	26	2	3	nw.	Clayton Holl.
New Waterford	Columbiana	1,053	16	64.8	+ 3.8	97	28	26	5	45	0.96	− 2.41	0.43	0	3	21	9	1	sw.	Sam. C. Scott.
Ohio State University	Franklin	757	28	66.4	+ 5.2	94	26†	34	2†	39	1.00	− 2.99	0.40	T.	5	13	11	7	w.	Prof. H. C. Lord.
Pataskala	Licking	1,015	16	65.9	+ 4.6	95	26	32	3	40	1.37	− 2.25	0.34	T.	9	11	19	1	sw.	J. N. Ridenour.
Peebles	Adams	645	1	65.4	.....	96	27†	27	5	50	0.89	.....	0.54	.0	6	15	13	3	e.	Ora O. Smalley.
Philo	Muskingum	1,018	16	67.2	+ 4.4	93	28	33	3	41	1.25	− 2.34	0.63	.0	5	14	16	1	nw.	L. C. Burckholter.
Piqua	Miami	847	1	....	....	....	....	....	....	....	0.99	.....	0.56	.0	3	20	5	6	se.	Harry L. Roberts.
Plattsburg	Clarke	1,130	18	66.6	+ 5.1	96	28	31	2	38	2.03	− 1.42	0.83	T.	7	15	13	3	w.	F. E. Stewart.
Portsmouth	Scioto	527	80	68.6	+ 3.6	96	26	31	5	36	0.89	− 2.69	0.31	.0	5	21	5	5	w.	Dr. H. A. Shirrmann.
Prospect	Marion	909	1	....	....	....	....	....	....	....	2.27	.....	1.45	.0	4	....	....	....	....	Neil J. Gast.
Rittman	Wayne	990	19	64.3	+ 5.6	94	28	28	4	43	2.96	− 0.74	0.84	T.	7	25	4	2	w.	J. B. Gish.
Shenandoah	Richland	1,100	19	64.6	+ 5.8	96	28	29	3	41	1.26	− 2.74	0.46	T.	6	9	21	1	sw.	T. B. Arnett.
Sidney	Shelby	985	28	67.4	+ 5.7	99	28	33	3	38	1.67	− 2.66	0.53	.0	6	22	6	3	sw.	Hamline B. Blake.
Somerset	Perry	1,060	12	68.8	+ 5.6	97	26	33	3	42	1.48	− 2.39	0.47	.0	5	22	6	3	n.	Miss M. W. C. Sheridan.
Springfield	Clarke	980	17	....	....	....	....	....	....	....	1.80	− 1.51	0.71	T.	8	13	18	0	sw.	W. A. Webster.
Summerfield	Noble	1,187	5	65.2	.....	94	28	29	5	48	1.85	.....	0.88	T.	4	16	14	1	s.	H. R. McClintock.
Syracuse	Meigs	583	1	69.0	.....	98	26	32	3†	42	2.11	.....	0.62	.0	5	20	10	1	s.	E. G. Campbell.
Thurman	Gallia	696	18	68.6	+ 4.3	94	26	32	5	38	1.89	− 0.96	0.76	.0	3	13	12	6	.....	D. D. Thomas.
Urbana	Champaign	1,031	43	67.1	+ 5.8	101	27	30	3†	43	2.57	0.93	1.31	.0	8	12	18	1	w.	Prof. J. H. Williams.
Warren	Trumbull	900	22	64.8	+ 6.2	98	28	30	6	41	2.16	− 1.72	0.65	T.	7	20	6	5	sw.	M. D. McCorkle.
Waverly	Pike	590	28	68.8	+ 4.7	98[a]	26†	31	4	43[a]	1.93	− 1.87	0.63	.0	5	22	4	5	s.	Herrman A. Lorbach.
Waynesville	Warren	706	26	67.2[b]	+ 4.9	94[b]	28	34[b]	3	33[b]	1.64	− 2.36	0.84	.0	5	20	8	3	sw.	Charles Michener.
Wooster	Wayne	1,030	32	63.6	+ 5.0	92	28	28	5	44	2.45	− 1.47	0.86	T.	9	19	8	4	sw.	Experiment Station.
Youngstown	Mahoning	846	18	....	....	....	....	....	....	....	1.15	− 2.29	0.67	.0	10	22	0	9	w.	G. R. Patton.
Zanesville	Muskingum	700	24	....	....	....	....	....	....	....	1.20	− 2.39	0.40	T.	6	24	1	6	.....	S. G. Sprague.
Virginia.																				
Big Stone Gap	Wise	1,540	20	66.2	+ 3.4	90	29	32	3	36	1.55	− 2.60	0.80	.0	4	23	5	3	w.	John W. Fox, sr.
Blacksburg	Montgomery	2,170	20	63.2	+ 2.9	91	19	29	3	45	1.75	− 2.23	0.85	.0	7	16	9	6	e.	Agricultural Experiment Sta.
Burkes Garden	Tazewell	3,250	16	58.4	+ 0.5	83	29†	23	6	43	1.07	− 3.81	0.66	.0	3	21	4	6	w.	C. H. Greever.
Elk Knob	Lee	3,243	8	69.1	.....	89	19†	32	3	29	0.98	.....	0.38	.0	6	17	12	2	sw.	Henry Nicoll.
Ivanhoe **	Wythe	2,028	7	65.0	.....	84	19†	38	3	28	1.84	.....	0.92	.0	5	24	5	2	w.	Miss Alice G. Jewett.
Lebanon	Russell	2,131	1	64.6	.....	90	19†	28	3	41	0.88	.....	0.34	.0	5	21	7	3	s.	R. W. Swain.
Max Meadows	Wythe	2,028	15	62.3	+ 0.4	89	26	31	3	38	0.69	− 3.25	0.44	.0	2	24	6	1	sw.	James M. Graham.
Mendota	Washington	1,350	2	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Frank M. Barker.
Radford	Montgomery	1,773	2	....	....	....	....	.....	....	....	1.67	.....	0.42	.0	5	....	....	....	.....	Arthur Roberts.
Speers Ferry	Scott	1,221	15	....	....	....	....	.....	....	....	1.40	− 2.55	0.82	.0	4	....	....	....	.....	Mrs. L. E. Venable.
Wytheville	Wythe	2,293	18	63.4	+ 2.0	86	26	30	3	38	1.46	− 2.45	0.69	.0	5	22	8	1	nw.	U. S. Weather Bureau.
North Carolina.																				
Andrews	Cherokee	1,800	1	67.6	.....	94	26†	36	7†	46	1.75	.....	0.75	.0	8	22	9	0	sw.	J. D. Link.
Asheville	Buncombe	2,250	32	64.8	+ 2.2	87	17	36	3	35	2.69	− 1.09	1.11	.0	10	16	10	5	se.	U. S. Weather Bureau.
Banners Elk	Avery	3,750	3	58.2	.....	84	27	26	3†	40	2.05	.....	1.32	.0	8	18	8	5	w.	T. L. Lowe.
Brevard	Transylvania	2,230	10	64.0	+ 0.3	90	26	32	7	40	2.24	− 2.62	0.67	.0	5	23	8	0	s.	W. E. Breese.
Bryson City	Swain	2,000	23	....	....	....	....	....	....	....	0.71	− 3.07	0.42	.0	5	....	....	....	.....	D. K. Collins.
Cullowhee	Jackson	2,100	1	64.8	.....	92	27	33	7	44	1.83	.....	0.82	.0	8	21	7	3	nw.	Frank H. Brown.
Hendersonville	Henderson	2,167	15	64.4	+ 0.7	88	18†	33	7	39	1.88	− 2.69	0.97	.0	3	27	1	3	nw.	Dr. L. B. Morse.
Highlands	Macon	3,670	21	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	T. G. Harbison.
Hot Springs	Madison	1,326	13	68.5	+ 2.5	92	27†	35	3	35	0.54	.....	0.37	.0	3	22	7	2	w.	P. A. Garner.
Jefferson	Ashe	2,800	4	63.6	.....	89	17	30	3†	39	2.31	.....	1.04	.0	6	9	11	11	w.	Prof. E. J. Johnson.
Marshall	Madison	1,646	10	66.8	+ 2.7	95	28	36	3†	41	0.32	− 3.21	0.22	.0	2	26	4	1	w.	M. L. Church.
Murphy	Cherokee	1,614	35	....	....	....	....	....	....	....	1.66	− 1.94	0.51	.0	6	....	....	....	.....	James C. Midyett.
Rock House	Macon	3,100	19	63.5	+ 0.3	85	26	38	3	24	2.91	− 2.15	0.84	.0	10	18	11	2	n.	B. C. Hawkins.
Waynesville	Haywood	2,756	17	63.6	+ 1.4	90	27	33	3†	38	0.98	− 2.90	0.43	.0	9	26	1	4	ne.	Judge J. C. L. Gudger.
Georgia.																				
Diamond	Gilmer	2,020	21	68.0[a]	+ 2.9	92	27†	39	6†	42	2.14	− 3.18	0.82	0	5	21	8	2	.....	R. A. Kimzey.
Lafayette	Walker	871	4	70.0	.....	96	27	38	4	45	2.50	.....	0.95	0	5	23	5	3	s.	Ralph A. Snow.

TABLE 1.—*Climatological data for May, 1911. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Alabama.																			
Bridgeport	Jackson	660	11								2.99	− 2.01	1.16	0	6				n.	R. L. Moore.
Decatur	Morgan	573	29	71.8	+ 2.0	97	28†	42	3†	41	2.69	− 1.24	1.78	0	5	25	2	4	e.	Ernest A. Carriger.
Florence	Lauderdale	563	27	74.2	+ 5.3	95	28†	46	3	33	4.31	+ 0.38	3.17	0	4	23	1	7	e.	Robt. E. Coburn.
Guntersville	Marshall	580	1	70.2	.....	94	26†	41	3	44	3.27	.....	1.55	0	5	24	1	6	sw.	L. S. Long.
Madison	Madison	573	17	71.3	+ 1.8	98	27†	41	3†	38	1.10	− 3.03	0.80	0	4	25	6	0	nw.	Albert Klish.
Riverton	Colbert	360	14	70.0	+ 1.4	101	29	35	6	46	1.44	− 3.35	0.64	0	4	22	2	7	e.	Ernie J. Moore.
Scottsboro	Jackson	652	28	69.8	+ 1.7	93	27†	41	3†	41	1.29	− 2.84	0.66	0	6	18	7	6	sw.	H. A. Caldwell.
Tuscumbia	Colbert	488	29	72.5	+ 3.5	100	30	44	7	38	2.58	− 1.04	1.74	0	5	22	3	6	se.	Samuel Moore.
Tennessee.																			
Ashwood	Maury	725	32	69.3	+ 1.7	96	28	36	3†	42	2.86	− 1.10	0.87	0	6	19	7	5	s.	Mrs. Joseph W. Fleming.
Benton	Polk	880	26	70.2	+ 3.2	94	17†	37	7	46	3.63	− 0.58	1.32	0	6	20	10	1	s.	George L. Williams.
Birds Bridge	Greene	.....	5	.....	.....	.....	.....	.....	.....	.....	1.09	.....	0.84	0	3	24	3	4	w.	David B. George.
Bluff City	Sullivan	.....	14	.....	.....	.....	.....	.....	.....	.....	1.20	.....	0.54	0	4	22	2	7	.....	John W. Fisher.
Byrdstown	Pickett	1,026	18	.....	.....	93	27†	.....	.....	.....	2.37	− 2.16	1.56	0	4	14	12	5	s.	John Lacy.
Carthage	Smith	500	27	71.8	+ 4.8	98	29	39	6	43	1.86	− 1.91	1.10	0	3	19	2	10	se.	Earl C. Pickering.
Cedar Hill	Robertson	625	11	72.4	+ 5.3	100	27†	35	3	39	2.52	− 1.71	1.10	0	7	25	4	2	s.	J. Frank Ruffin.
Celina	Clay	494	8	.....	.....	.....	.....	.....	.....	.....	0.87	.....	0.53	0	3	21	1	9	s.	Stephen B. Anderson.
Center Point	Chester	400	14	.....	.....	.....	.....	.....	.....	.....	0.78	− 3.35	0.50	0	2	27	0	4	s.	Halbert H. Bailey.
Charleston	Bradley	709	14	.....	.....	.....	.....	.....	.....	.....	2.55	− 2.33	1.55	0	5	23	1	7	s.	John T. Weeks.
Chattanooga	Hamilton	808	32	71.4	+ 2.8	95	27	43	3	32	1.81	− 1.81	0.93	0	6	20	6	5	ne.	U. S. Weather Bureau.
Clarksville	Montgomery	500	48	70.4	+ 4.5	98	28	37	3	39	1.40	− 2.73	0.77	0	3	23	8	0	s.	Prof. James A. Lyon.
Clinton	Anderson	800	23	.....	.....	.....	.....	.....	.....	.....	1.20	− 2.49	0.63	0	5	28	0	3	ne.	John Thompson.
Dandridge	Jefferson	.....	7	.....	.....	.....	.....	.....	.....	.....	2.04	.....	1.60	0	3	27	1	3	w.	James E. Swann.
Decatur	Meigs	850	15	70.2	+ 2.7	96	31	37	3	45	2.39	− 2.11	0.86	0	7	24	4	3	sw.	J. Worth Lillard.
Dickson	Dickson	800	15	68.4	+ 1.5	94	29†	35	3	37	1.27	− 3.26	0.83	0	3	19	12	0	s.	Nathan R. Sugg.
Dover	Stewart	500	16	71.0	+ 3.5	100	28	37	3	41	1.07	.....	0.45	0	3	18	9	4	s.	Asa M. Tippit.
Dunlap	Sequatchie	726	2	70.1	.....	97	28	37	6	49	2.48	.....	1.29	0	5	19	11	1	.....	S. Bradford Boyd.
Elizabethton	Carter	1,575	21	.....	.....	.....	.....	.....	.....	.....	1.22	− 2.96	0.80	0	3	27	1	3	e.	Charles Boyd.
Erasmus	Cumberland	1,850	14	64.3	+ 2.2	93	27†	33	6	46	1.34	− 3.23	0.41	0	6	20	11	0	se.	Mrs. Sara E. Ashley.
Florence	Rutherford	560	29	69.2	+ 1.9	92	28†	37	3	36	4.43	+ 0.41	1.97	0	4	26	2	3	s.	Erastus P. Bell.
Franklin	Williamson	648	21	69.2	+ 2.5	94	30†	37	3	37[d]	0.70	− 3.34	0.52	0	3	21	6	4	.....	Young M. Rizer.
Halls Hill	Rutherford	.....	9	.....	.....	.....	.....	.....	.....	.....	1.41	.....	0.75	0	3	25	1	5	s.	Ed F. Wright.
Harriman	Roane	841	16	72.4	+ 5.3	98	27†	37	3	44	1.50	− 2.33	1.09	0	2	16	15	0	.....	Robert R. Ayres.
Hohenwald	Lewis	983	25	68.8	+ 2.6	96	30	35	3	41	2.34	− 1.89	0.99	0	5	19	11	1	sw.	John Lutzelman.
Iron City	Lawrence	600	14	68.8	+ 1.7	94	18†	37	3†	42	2.40	− 2.01	0.95	0	5	8	23	0	nw.	Capt. H. Paul Seavy.
Jefferson City	Jefferson	.....	1	.....	.....	.....	.....	.....	.....	.....	0.98	.....	0.26	0	8	.....	.....	.....	.....	Calvin C. Maddox.
Johnson City	Washington	1,620	...	69.2	+ 4.6	96	27	33	3	40	2.03	− 2.16	1.20	0	5	23	4	4	nw.	Ward Crosby.
Johnsonville	Humphreys	364	15	70.2	+ 2.0	100	28†	36	3	44	1.59	− 2.39	0.68	0	4	23	6	2	s.	Miss Sallie B. Matthews.
Kingston	Roane	.....	20	.....	.....	.....	.....	.....	.....	.....	1.28	− 2.66	0.93	0	4	24	0	7	n.	Henry Crumbliss.
Knoxville	Knox	977	40	70.4	+ 3.9	93	27	39	3	31	1.23	− 2.49	0.61	0	7	13	17	1	ne.	U. S. Weather Bureau.
Lebanon	Wilson	522	2	.....	.....	94	17†	.....	.....	.....	3.29	.....	2.26	0	5	21	5	5	n.	H. Logan Fields.
Lewisburg	Marshall	727	16	70.2	+ 2.8	98	28	35	3†	43	2.96	− 0.84	1.95	0	6	23	6	2	s.	Dr. Robert D. Crutcher.
Livingston	Overton	1,000	...	66.6	.....	95	28†	33	7	46	0.99	.....	0.71	0	2	26	3	2	nw.	Livingston Academy.
Loudon	Loudon	816	8	.....	.....	.....	.....	.....	.....	.....	1.42	− 2.80	0.86	0	3	20	8	3	w.	Robert W. Clark.
Lynnville	Giles	770	23	69.3	+ 2.7	93	28†	39	3	37	2.50	− 1.93	1.05	0	4	19	12	0	s.	Col. James H. Burrow.
McGhee	Monroe	.....	7	.....	.....	.....	.....	.....	.....	.....	0.83	.....	0.43	0	2	25	0	6	s.	Miss Alice L. Headrick.
McMinnville	Warren	1,011	27	68.8	+ 2.0	95	29	35	3	40	3.03	− 0.77	1.98	0	4	17	12	2	n.	J. Tilden Sparkman.
Maryville	Blount	1,050	15	69.8	+ 2.4	94	27†	38	3	34	0.91	− 3.04	0.55	0	3	23	8	0	e.	Mrs. Sam T. Broyles.
Mountain City	Johnson	2,486	14	63.2	+ 2.1	89	30	29	3	42	1.71	− 2.51	0.53	0	7	22	8	1	.....	Edward E. Barry.
Nashville	Davidson	654	40	71.4	+ 2.6	96	28	40	3	33	1.67	− 1.83	1.55	0	5	19	8	4	sw.	U. S. Weather Bureau.
Newport	Cocke	1,280	21	68.4	+ 2.3	91	27	37	3	37	1.85	− 2.58	0.90	0	6	21	5	5	s.	Dr. Charles T. Burnett.
New River	Scott	1,215	4	.....	.....	.....	.....	.....	.....	.....	3.19	.....	1.01	0	4	27	1	3	sw.	Burl W. Buttram.
Palmetto	Bedford	770	18	70.0	+ 2.1	95	18†	35	5	41	4.05	+ 0.03	3.00	0	4	25	2	4	s.	Mrs. Ross Woods.
Pinewood	Hickman	.....	4	68.8	.....	99	28	32	4	50[d]	0.87	.....	0.37	0	4	20	9	2	s.	Miss Carrie Cash.
Pope	Perry	400	14	70.7	+ 2.5	101	18	34	6	46	1.74	− 2.26	.....	0	...	18	11	2	n.	Miss Bessie Howard.
Rogersville	Hawkins	1,150	26	68.0	+ 3.3	94	27	32	3	40	1.04	− 2.66	0.62	0	6	23	7	1	e.	Fred Beal.
Rugby	Morgan	1,410	23	67.2	+ 4.0	95	27†	30	3†	42	1.54	− 2.88	0.32	0	7	18	9	4	se.	Samuel G. Wilson.
Savannah	Hardin	442	27	69.2	+ 0.5	96[e]	28	39	5†	38[e]	1.40	− 2.95	0.70	0	3	.....	.....	.....	.....	William Fort Bell.
Sevierville	Sevier	.....	5	67.8	.....	92	18†	35	3	39	1.41	.....	0.85	0	6	12	12	7	sw.	Herbert O. Eckel.
Sewanee	Franklin	2,000	15	70.1	+ 4.8	90	26†	39	3	27	2.16	− 1.99	.....	0	5	22	4	5	s.	Arthur H. Noll.
Sparta	White	920	5	69.0	.....	95	27†	34	3	40	1.62	.....	0.90	0	3	15	12	4	w.	Ernest H. Hull.
Springdale	Claiborne	1,058	21	72.7	.....	97	15	30	4	49[b]	1.25	.....	1.02	0	3	.....	.....	.....	.....	Mrs. Lucy E. Breeding.
Springville	Henry	377	8	69.1	.....	98	28†	35	3	41	1.34	.....	0.58	0	4	26	3	2	s.	Hudnall A. Boden.
Tazewell	Claiborne	.....	14	.....	.....	.....	.....	.....	.....	.....	2.58	.....	0.87	0	5	24	0	7	sw.	J. Caloway Carr.
Tullahoma	Coffee	1,075	23	69.2	+ 3.5	94	27	37	6	41	2.75	− 0.91	1.80	0	4	23	5	3	n.	Reuben T. Moore.
Walling	White	909	8	.....	.....	.....	.....	.....	.....	.....	2.35	.....	1.15	0	3	24	2	5	s.	John K. Roberts.
Waynesboro	Wayne	753	25	68.2	+ 2.0	96	30	35	6†	41	1.16	− 2.76	0.55	0	4	16	13	2	sw.	Harry C. Boyd.
Wildersville	Henderson	400	14	71.4	+ 3.6	98	28†	38	3	40	0.92	− 4.44	0.32	0	3	23	6	2	n.	William R. Wilson.
Worsham	Sumner	550	10	.....	.....	.....	.....	.....	.....	.....	3.72	.....	1.40	0	6	19	6	6	w.	James G. Elizer.
Yukon	Lincoln	850	14	70.6	+ 1.8	92	18†	39	3	32	3.18	− 0.91	1.70	0	3	20	8	3	se.	William P. Watson.
Kentucky.																			
Alpha	Clinton	.....	17	68.6	+ 1.7	89	27†	37	3	32	4.69	+ 1.24	2.53	0	6	25	4	2	s.	W. W. Hicks.
Anchorage	Jefferson	700	10	67.2	+ 3.1	97	28	31	3	37	3.84	− 0.13	1.34	0	5	25	2	4	sw.	C. E. Barrett.
Bardstown	Nelson	637	14	71.2	+ 4.5	102	28	33	3	41	3.33	− 0.09	2.25	0	6	22	2	7	se.	G. M. Talbot.
Beattyville	Lee	650	7	67.4	.....	97	26	29	3	45	1.20	.....	0.78	0	5	18	6	7	sw.	G. W. Cann.
Beaver Dam	Ohio	441	8	70.2	.....	98	28	34	3	41	4.74	.....	3.05	0	4	25	0	6	ne.	T. S. Woodward.
Berea	Madison	1,070	10	68.8	+ 3.2	96	26	32	5	42	0.64	− 3.49	0.33	0	5	28	3	0	ne.	C. F. Rumold.
Bowling Green	Warren	500	22	70.8	+ 3.2	100	28	35	3	40	4.05	− 0.03	1.40	0	7	18	3	10	s.	Mrs. L. G. Causey.
Burnside	Pulaski	773	20	.....	.....	.....	.....	.....	.....	.....	4.33	+ 0.26	3.28	0	7	24	4	3	.....	G. M. Estes.
Calhoun	McLean	397	8	71.1	.....	98	28	39	3	34	2.88	.....	1.15	0	4	16	12	3	sw.	W. A. Taylor.
Catlettsburg	Boyd	544	22	.....	.....	.....	.....	.....	.....	.....	1.12	− 3.04	0.60	0	6	25	1	5	nw.	Mrs. Mertie M. Bruns.
Earlington	Hopkins	370	21	71.4	+ 4.6	105	28	34	3	47	3.43	− 1.58	2.10	0	6	24	3	4	s.	J. B. Atkinson.
Edmonton	Metcalfe	600	20	68.0	+ 3.0	95	28	32	3	40	3.07	− 1.35	2.10	0	6	20	9	2	s.	Miss Lee Ray.
Eubank	Pulaski	1,177	17	67.0	+ 2.5	93	28	30	3	37	2.71	− 0.99	1.35	0	6	19	8	4	e.	Mrs. Katie Payne.
Falmouth	Pendleton	530	22	.....	.....	.....	.....	.....	.....	.....	2.09	− 1.49	0.98	0	3	18	10	3	.....	J. V. Oldham.
Farmers	Rowan	668	5	68.9	.....	97	27	29	2	49	0.74	.....	0.39	0	2	26	1	4	w.	Miss Gertrude Sorrell.
Frankfort	Franklin	500	20	68.3	+ 3.4	96	28	34	2	33	2.20	− 1.62	0.80	0	5	25	3	3	n.	J. H. Roberts.
Franklin	Simpson	691	17	70.6	+ 3.7	98	28†	36	3	35	1.66	− 2.30	0.89	0	4	11	19	1	ne.	J. E. Newman.
Greensburg	Green	581	19	67.2	+ 2.1	95	28	32	3	47	4.66	+ 0.74	2.00	0	7	23	0	8	se.	L. C. Alcorn.
High Bridge	Jessamine	762	8	.....	.....	.....	.....	.....	.....	.....	2.71	.....	1.54	0	7	23	3	5	.....	Miss Lulu Wood.
Hopkinsville	Christian	524	15	71.8	+ 4.4	100	30	34	3	44	2.90	− 1.47	0.90	0	6	18	7	6	e.	W. F. Randle.
Irvington	Breckenridge	.....	13	69.4	+ 2.4	94	27	35	3	34	4.82	+ 1.31	2.19	0	5	19	7	5	sw.	W. J. Piggott.
Leitchfield	Grayson	635	15	68.0	+ 2.8	93	28	34	3	33	1.59	− 2.79	.....	0	...	21	8	2	s.	John E. Stone.
Lexington	Fayette	989	23	69.5	+ 5.2	93	28	36	2	32	1.07	− 2.45	0.56	0	7	16	9	6	ne.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for May, 1911. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing direction of wind.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Kentucky*—Continued.**																				
Loretto	Marion	681	14	67.8	+ 1.9	96	27†	31	3	42	1.34	− 2.35	0.35	0	5	27	2	2	.....	Loretto Academy.
Louisville	Jefferson	525	39	71.8	+ 5.1	98	28	39	2	31	2.08	− 1.56	0.80	0	6	15	14	2	sw.	U. S. Weather Bureau.
Marion	Crittenden	.....	16	70.8	+ 3.8	96	28	39	3	29	3.93	− 0.27	1.43	0	6	20	7	4	w.	B. C. Paris.
Maysville	Mason	524	14	69.6	+ 4.6	99	27	33	3†	42	1.23	− 2.56	0.75	0	6	23	3	5	se.	Mrs. Mary D. Marsh.
Middlesboro	Bell	1,128	16	69.0	+ 4.6	95	27†	32	3	42	1.64	− 2.59	0.82	0	9	21	10	0	.....	B. H. Perkins.
Mount Sterling	Montgomery	930	21	69.8	+ 5.9	98	27	34	3	42	1.42	− 2.63	0.73	0	6	23	4	4	s.	James O'Connell.
Owensboro	Daviess	479	15	69.8	+ 3.6	94	28	38	3	38	5.50	+ 1.61	2.26	0	6	19	6	6	se.	Henry S. Berry.
Owenton	Owen	700	15	70.4	+ 4.4	94	29	35	2	33	2.35	− 1.91	0.77	0	4	13	18	0	.....	J. T. Walker.
Paducah	McCracken	341	22	.....	.....	.....	.....	.....	.....	.....	1.60	− 2.37	0.90	0	4	27	0	4	s.	S. A. Fowler.
Paintsville	Johnson	.....	0	70.2	.....	96	26	31	3	42[c]	0.68	.....	0.37	0	2	18[d]	7[d]	2[d]	.....	R. L. Atkinson.
Pikeville	Pike	.....	3	.....	.....	.....	.....	.....	.....	.....	0.48	.....	0.36	0	2	28	0	3	.....	I. M. Williams.
Richmond	Madison	926	19	71.2	+ 5.7	97	28	35	3	36	1.95	− 1.59	1.12	0	5	25	0	6	.....	J. W. Crooke.
St. John	Hardin	777	15	68.4	+ 4.0	96	28	33	3	39	2.67	− 1.35	1.70	0	4	24	0	7	.....	Bethlehem Academy.
Scott	Kenton	.....	13	69.0	+ 4.7	97	27	34	4	35	2.38	− 1.96	1.32	0	6	16	14	1	n.	E. B. Wilson.
Shelby City	Boyle	1,087	17	68.4	+ 3.7	99	27†	29	3	44	0.86	− 2.96	0.25	0	7	25	3	3	sw.	W. E. Grubbs.
Shelbyville	Shelby	759	22	71.8	+ 6.8	102	28	34	3	40	2.30	− 1.71	0.99	0	5	24	3	4	sw.	C. R. Burnett.
Taylorsville	Spencer	489	9	67.6	.....	95	27†	31	3	39	2.16	.....	0.78	0	7	20	8	3	w.	E. D. Bourne.
Williamsburg	Whitley	939	15	68.0	+ 1.9	95	27†	31	3	43	3.26	− 0.61	1.32	0	5	24	1	6	e.	Noble C. Jones.
Williamstown	Grant	943	9	69.4	.....	96	28	33	3	39	1.15	.....	0.47	0	5	24	4	3	.....	Mrs. Sarah E. Carter.
Indiana.																				
Anderson	Madison	892	16	67.2	+ 5.2	96	27†	32	2†	39	2.00	− 2.14	0.53	0	11	21	7	3	sw.	W. H. Stanton.
Attica	Fountain	522	1	.....	.....	.....	.....	.....	.....	.....	0.71	.....	0.39	0	8	.....	.....	.....	.....	Robt. E. Ray.
Bloomington	Monroe	744	16	68.2	+ 4.4	97	28	33	3†	40	3.97	+ 0.65	1.20	0	8	22	6	3	sw.	Earl E. Ramsey.
Bluffton	Wells	835	16	66.2	+ 5.2	101	27	29	3	41	2.48	− 1.31	0.94	.....	8	14	15	2	sw.	Tom R. Johnston.
Butlerville	Jennings	767	26	68.2	+ 4.6	98	28	32	4	40	4.90	+ 0.29	2.47	0	9	23	6	2	.....	C. F. Hole.
Cambridge City	Wayne	941	20	66.2	+ 6.0	98	27	30	5	42	1.62	− 2.45	0.45	0	9	27	0	4	sw.	Charles Lemberger.
Columbus	Bartholomew	632	28	67.4	+ 5.0	97	27†	31	4	42	2.02	− 1.33	0.54	0	9	23	3	5	sw.	John A. Perry.
Connersville	Fayette	769	29	68.4	+ 6.9	102	27	30	5	44	0.50	− 3.67	0.30	0	2	12	0	19	sw.	H. T. Swindler.
Crawfordsville	Montgomery	780	1	68.6	.....	99	26†	32	3†	42	1.31	.....	0.85	0	3	15	12	4	sw.	P. H. Burns.
Delphi	Carroll	668	26	68.0	+ 7.4	98	27	30	3†	41	3.14	− 1.49	1.04	0	8	10	17	4	.....	L. A. Higginbotham.
Eminence	Morgan	782	5	66.5	.....	94	27†	30	5	39	1.83	.....	0.73	0	4	24	6	1	sw.	E. E. Kelso, M. D.
Evansville	Vanderburg	386	35	71.8	+ 4.7	98	28	41	2	29	1.30	− 2.13	0.41	0	10	14	17	0	s.	U. S. Weather Bureau.
Farmersburg	Sullivan	.....	13	67.6	.....	94	27†	34	3	42	1.08	− 3.61	0.55	0	5	7	22	2	s.	Maurice Yeager.
Farmland	Randolph	1,101	29	66.9	+ 6.1	94	27	34	3†	32	1.69	− 2.61	0.35	0	8	17	3	11	w.	W. J. Davisson.
Greenfield	Hancock	905	8	67.4	.....	95	28	34	3†	34	2.30	.....	0.61	0	7	4	25	2	sw.	Prof. W. C. Goble.
Greensburg	Decatur	954	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. H. Ewing.
Huntingburg	Dubois	462	3	69.4	.....	100	28	32	3	43	1.79	.....	0.97	0	3	.....	.....	.....	.....	H. Dufendach.
Huntington	Huntington	741	18	67.2	+ 6.2	96	26	30	3	36	3.59	− 0.41	1.13	0	7	15	12	4	sw.	Chas. McGrew.
Indianapolis	Marion	822	40	68.6	+ 5.3	96	28	35	1	29	0.91	− 3.03	0.35	0	6	13	15	3	s.	Section Center
Jeffersonville	Clark	455	29	70.0	+ 4.1	96	28	37	3	35	2.25	− 1.71	0.80	0	6	20	8	3	w.	John C. Loomis.
Judyville	Warren	.....	4	66.6[a]	.....	98[a]	26	27	5	45[a]	0.62	.....	0.54	0	2	24	5	2	s.	Dale R. Warrick.
Kokomo	Howard	840	19	66.0	+ 3.8	95	27	29	5	38	2.46	− 1.53	1.03	0	8	16	12	3	sw.	P. H. Robertson.
Lafayette	Tippecanoe	617	32	67.5	+ 6.3	96	27†	31	3	36	2.21	− 2.20	0.88	0	7	24	3	4	s.	Wm. J. Jones, Jr.
Logansport	Cass	620	31	69.0	+ 6.8	101	27	29	5	44	2.85	− 1.39	1.30	0	7	22	4	5	e.	Chas Massena.
Madison	Jefferson	460	19	70.0	+ 4.5	102	28	35	3†	42	2.30	− 2.16	0.63	0	7	25	4	2	.....	Dr. J. Cooperider.
Marengo	Crawford	363	29	67.2	+ 2.8	95	28	31	3	41	3.52	− 1.57	2.00	0	9	12	17	2	sw.	J. M. Johnson.
Marion	Grant	814	25	67.4	+ 6.5	100	27	30	3	40	0.99	− 2.93	0.30	0	7	17	8	6	s.	James F. Hood.
Mauzy	Rush	980	31	65.8	+ 4.8	96	28	31	5	38	2.39	− 2.04	0.82	0	9	15	10	6	sw.	Elwood Kirkwood.
Monticello	White	674	1	.....	.....	.....	.....	.....	.....	.....	3.24	.....	0.74	0	9	20	9	2	s.	J. E. Loughry.
Moores Hill	Dearborn	980	10	67.8	.....	97	27	34	2	32	2.17	.....	1.00	0	7	19	8	4	w.	W. S. Bigney.
Mount Vernon	Posey	410	25	69.7	+ 3.6	96	28	37	3	37	3.36	− 0.37	2.52	0	6	21	5	5	s.	Guy B. Green.
Paoli	Orange	611	14	67.0	+ 2.3	96	28	30	3	41	3.65	− 0.37	1.12	0	10	18	12	1	sw.	James A. Gillum.
Princeton	Gibson	481	29	69.8	+ 5.3	100	28	33	3	39	0.98	− 2.65	0.51	0	5	22	7	2	sw.	Albert Mills.
Richmond	Wayne	972	26	65.2	+ 4.5	98	27	31	5	44	2.12	− 1.89	0.67	0	7	14	15	2	.....	Walter Vossler.
Rochester	Fulton	775	6	67.0	.....	94	27	32	3	41	3.17	.....	2.15	0	8	19[a]	7[a]	4[a]	.....	G. P. Keith.
Rockville	Parke	722	25	67.3	+ 5.3	93	27†	34	3	32	0.85	− 3.36	0.37	0	5	14	10	7	s.	Dr. W. N. Wirt.
Rome	Perry	370	8	70.6[b]	.....	103[b]	28	35[b]	3	42[b]	1.52	.....	0.62	0	8	23[b]	3[b]	3[b]	sw.	Adam Anspach.
Salamonia	Jay	.....	6	65.3[b]	.....	96[b]	27	29[b]	5	40[b]	1.49	.....	0.59	0	6	10[a]	7[a]	13[a]	sw.	Chas. V. Skinner.
Salem	Washington	717	18	67.2	+ 3.4	96	27†	31	3	41	4.38	+ 0.63	1.85	0	8	17	12	2	sw.	Emmet S. Allen.
Scottsburg	Scott	570	17	71.6	+ 6.1	99	27	36	3	38	2.63	− 1.28	1.30	0	6	16	13	2	s.	Frank H. Park.
Seymour	Jackson	610	24	69.1	+ 5.5	101	28	32	3†	44	4.56	+ 0.39	1.43	0	9	15	16	0	w.	J. Robt. Blair.
Shelbyville	Shelby	768	7	69.5	.....	98	28	32	4†	40	2.46	.....	0.63	0	11	16	15	0	sw.	Edgar G. Hodson.
Shoals	Martin	523	4	.....	.....	.....	.....	.....	.....	.....	3.33	.....	1.32	0	8	.....	.....	.....	s.	Oliver H. Greist.
Terre Haute	Vigo	498	21	71.5	+ 6.7	98	28	38	3†	32	0.46	− 3.65	0.18	0	4	16	11	4	sw.	Prof. R. G. Gillum.
Veedersburg	Fountain	612	12	68.6	+ 6.1	99	27†	29	5	43	1.08	− 3.35	0.50	0	7	23	6	2	s.	L. A. Culver, jr.
Vevay	Switzerland	525	30	70.0	+ 4.9	97	27	34	3	39	4.97	+ 0.33	2.20	0	8	5	21	5	sw.	Miss Frederica Boerner.
Vincennes	Knox	431	19	70.4	+ 4.5	100	27†	34	3†	41	4.85	+ 1.33	2.50	0	6	23	2	6	s.	Garrett V. List.
Washington	Daviess	484	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Charles C. Feagans.
Whitestown	Boone	529	3	68.4	.....	98	27	34	2	38	2.38	.....	1.32	0	7	13	17	1	sw.	Clyde O. Laughner.
Winona Lake	Kosciusko	865	4	67.0	.....	98	27	29	3	38	2.14	.....	0.51	0	8	7	23	1	sw.	Rev. Albert A. Young.
Worthington	Greene	526	29	68.6	+ 5.4	96	28	32	3	40	2.10	− 1.96	0.54	0	8	17	11	3	sw.	D. W. Solliday.
Illinois.																				
Albion	Edwards	531	20	69.7	+ 3.8	96	27†	35	3†	34	1.14	− 3.04	0.41	0	7	9	22	0	sw.	B. F. Michaels.
Charleston	Coles	720	26	69.3	+ 5.9	97	26†	31	3	38	0.52	− 3.36	0.33	0	5	11	18	2	s.	Jacob B. Daisy.
Danville	Vermilion	604	10	69.3	+ 4.5	99	26	32	3†	42	0.73	− 2.81	0.46	0	6	22	3	6	sw.	J. J. Lemon.
Equality	Gallatin	421	13	72.6[c]	+ 5.2	100	28	40[b]	3†	37[b]	1.19	− 2.20	0.66	0	4	22	8	1	s.	Dr. L. W. Gordon.
Fairfield	Wayne	495	18	69.2[b]	+ 3.3	98	26†	33[d]	3	41[d]	1.20	− 2.55	0.56	0	3	23	0	8	s.	George A. Tromly.
Flora	Clay	495	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Joseph S. Peck.
Golconda	Pope	500	33	71.5	+ 4.2	101	28	38	3	40	0.99	− 3.09	0.36	0	5	18	9	4	sw.	Dr. D. Lawrence.
Hooperston	Vermilion	715	9	68.5	.....	95	27	30	3	36	2.26	.....	1.17	0	8	24	5	2	.....	S. F. Hoskinson.
McLeansboro	Hamilton	462	28	71.6	+ 6.5	100	28	35	3	45	0.86	− 2.95	0.29	0	5	22	3	6	se.	R. C. Robinson.
Mount Carmel	Wabash	424	10	69.6	+ 3.4	97	27†	36	3†	35	2.00	− 1.64	0.74	0	7	18	4	9	.....	Mrs. H. M. Phillips.
New Burnside	Johnson	566	16	68.8	+ 1.5	97	28	31	3	35	1.78	− 2.12	1.22	0	3	24	2	5	.....	Mrs. George Harris.
Olney	Richland	486	24	70.4	+ 5.0	98	26†	34	3	38	1.73	− 1.98	0.81	0	7	12	17	2	sw.	Victor E. Phillips.
Palestine	Crawford	500	29	69.8	+ 6.1	98	27†	35	3	35	1.42	− 2.17	0.50	0	6	17	9	5	sw.	Duane Shaw.
Paris	Edgar	600	18	68.6	+ 5.2	96	26†	32	3	37	1.45	− 2.49	0.55	0	5	22	8	1	sw.	H. P. Twyman.
Philo	Campaign	700	27	67.1	+ 5.4	96	26†	31	3	39	0.84	− 3.13	0.52	0	5	18	10	3	sw.	H. A. Burr.
Rantoul	....do	768	20	66.9	+ 4.9	96	26†	31	3	38	1.91	− 2.52	0.80	0	5	25	2	4	sw.	William Breiner.
Robinson	Crawford	500	11	69.9	+ 5.8	97	26†	35	3	35	1.72	− 2.34	0.90	0	8	22	4	5	sw.	A. P. Woodworth.
Sumner	Lawrence	459	5	68.9	.....	95	28	34[a]	3	34[a]	1.52	.....	0.41	0	6	21	3	7	s.	O. A. Fyffe.
Tuscola	Douglas	644	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. W. Lester.
Urbana	Champaign	725	9	67.4	.....	95	26	34	3	34	2.44	.....	1.24	0	7	11	19	1	sw.	Prof. J. G. Mosier.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 3, Ohio Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New York.																																	
Allegany	Allegheny	.65	.18	.02						T.	.16	.10	T.				.18			.33			.35	.33		.03			.06			.61	3.00
Bolivar	do	.43	.12	T.							T.	.15					.19	.16	.09	.39	.30			1.43	.27							.78	4.31
Olean	do	.30	.14									.24	.05					.40	.08		.45				.80								2.46
Pennsylvania.																																	
Allepo	Ohio	.79								T.																			.60		T.	.44	1.83
Baldwin	Allegheny	.24	.10																.43	.35			.05	.04							T.	.42	1.69
Beaver Dam	Ohio	.09	.25	T.						.01	.01	.15		.04						T.	T.			.05	T.							T.	0.60
Bradford	Allegheny	.57	.09	T.							.13	T.		.14	.13	.20				T.	.08		.03	.33								.32	2.02
Brookville	do	.02	.09								.38								.09	.06	.05									.03		.04	0.77
California	Monongahela	.70																			.25		T.							T.		.25	1.20
Clarion	Allegheny	.12	.18									.52						T.	.02	.05													0.89
Claysville	Ohio	.75	T.	T.						.07										T.	.04		T.	.19								.90	2.40
Confluence	You'og'ny	.35	.30																						.35						.09	.12	1.17
Davis Island Dam	Ohio	.07	.04	T.								.15									.45	.10		.29	.01						T.		1.11
Derry Station	Allegheny	.31	.01								.26		T.											.06					.42			.24	1.30
Franklin	do	.18	.16	.04								.45							.04		.20			.22	.03								1.32
Freeport	do	.09	.07								T.	.03								.02		.18		.13				.09					0.61
Greensboro	Monongahela	.32	.32																			.02									.30		0.96
Greensburg	You'og'ny	.69	.04							T.	.53									T.	T.		.12	.02	.02		.02			.38		.37	2.19
Greenville	Ohio	.38	.04	T.	T.					T.	.11		.32					.18		.32	.04			.16								.42	2.00
Grove City	do	.47	.04																	.21				.80								.41	1.93
Herrs Island Dam	Allegheny	.08	.14								T.	.01											T.	.01	T.						T.	.01	0.25
Indiana	do	.20	.35																											T.		T.	0.55
Irwin	Monongahela	.30	.28								.24									.24			.08	.12						.46		.33	2.05
Johnstown	Allegheny	.15	.05	.02							.04								.03	.10	.08			.45						2.85	T.	.42	4.22
Lock No. 4	Monongahela	.27	.86																	T.		T.		T.							.45	.32	1.93
Lycippus	Allegheny	.32	.03								.45										.08									.36		.22	1.46
Parkers Landing	do	.04	.20	T.																.04				.10									0.38
Pittsburg	Ohio	.13	T.	T.						T.	T.		T.							T.	T.		.01	T.						T.	T.	.28	0.42
Saegerstown	Allegheny	.55	.05	.05	.03						.05	.31	.28	.27		.04	.02	.30	.06		.08			.43	.03							.33	2.88
Saltsburg	do	.02	.28								T.	.12									T.			T.	.12							.20	0.74
Skidmore	Ohio																							.35								.65	1.00
Somerset	You'og'ny	.80									.14		.20								.76			.86						.25		.85	3.86
Springdale	Allegheny	.09	.12								.04	.77									.16			.96							.20		2.34
Uniontown	Monongahela	1.04		T.									T.										T.	T.			.23			.23		.31	1.81
Warren	Allegheny	1.30	.10	.08									.04				.10	.20						.17	.06							.35	2.23
West Newton	You'og'ny	.17	.56																	.16		.01		.17							.40	.08	1.55
Maryland.																																	
Deer Park	You'og'ny	T.	T.																					.23			.18			.15		.53	1.09
Grantsville	do	.10																		.05	.10			.23								.50	0.98
Oakland	do	.12	.06	T.																.04				.14	.01		.38	.10		.76	.08	.40	2.09
West Virginia.																																	
Bancroft	G. Kanawha	.08	.16								.06													.09						1.00			1.39
Beckley	do	.60																												.10		1.00	1.70
Bens Run	Ohio	.78																												.10		.50	1.38
Bluefield	G. Kanawha	.20												.03										.02				.01				.55	0.81
Brandonville	Monongahela	.10																								T.	.27				.35		0.72
Buckhannon	do	.10	.15		T.																.20	.10		.05	.05					T.		.82	1.47
Cairo	L. Kanawha	.24												.05																	.40	.35	1.04
Central Station	Mid. Is. Cr'k	.85			T.					T.			T.											.07						.15	T.	.57	1.64
Charleston	G. Kanawha	.28	.32																					T.							.45		1.05
Creston	L. Kanawha	T.	.06																			.32			T.						.45	T.	0.83
Cuba	Sand Creek	.23	T.							.12			T.											.31						.04	.02	.46	1.18
Davis	Monong'h'a	.20	T.				.10	.10	T.						.20	T.								.20	T.								0.80
Elizabeth	L. Kanawha	.18	.23							.01												.43		.42							.08		1.35
Elkhorn	Big Sandy		.25																					T.								1.25	1.50
Elkins	Monong'h'a	.23	.03	T.					01											.87	T.		.01	.12			.20			.17		.59	2.23
Fairmont	do	.17	.36								T.													.04	.23			.08			.40		1.28
Glenville	L. Kanawha	.26	.25																						T.						.24		0.75
Grafton	Monong'h'a	.54																		T.	T.		.02	T.	.40		.04			T.		.47	1.47
Green Sulphur Sprgs	G. Kanawha	.12	.07																	T.			.40	.11				.26		.06	.04	.45	1.51
Hinton	do	.60	.08																						.24			.30			.06	T.	1.28
Huntington	Ohio	.26	.42								.06											.02		.14									0.90
Lewisburg	G. Kanawha	.09							T.		T.										.06		T.	.03			.04			.47	.17	.53	1.39
Lost Creek	Monong'h'a	.03								.02											T.			T.	.08					.05		.22	0.40
Mannington	G. Kanawha	.66								T.													.05	.01			T.			.18		.79	1.69
Marlington	do	.21	.01																								.04				.81	.28	1.35
Morgantown	Monong'h'a	.53									T.		.05								T.		.41	.03						.15	.05	.57	1.79
Moundsville	Ohio	.55								.07	.04													.29						.03		.24	1.22
New Cumberland	do	.15								T.			T.							.22				T.							T.	.50	0.87
New Martinsville	do	.77																						.03						.48		.28	1.56
Nuttallburg	G. Kanawha	.10	T.																								.60					1.20	1.90
Parkersburg	Ohio	.53								.01											T.		.43	.03						.45		.32	1.77
Parsons	Monong'h'a																							.80			.85			.70		.25	2.60
Philippi	do	.26								.02									.05	T.		T.	.17	.11			.05			.06		.41	1.13
Pickens	do	.20	.09	T.						.03										T.				.05					T.			.49	0.86
Point Pleasant	Ohio	.24	.26							T.	.06			.36									.24	.52	.04								1.72
Powellton	G. Kanawha	.10	.02							.05																					.27	1.50	1.94
Princeton	do	.10																									.10						0.20
Robertsburg	do	.37	.10							T.	.06	.07											.06	.30							T.		0.96
Rowlesburg	Monongahela	.02	.06																		.70			.04	.60			.40			.26		2.08
Ryan	G. Kanawha	.35								.09	T.													T.						.32		.55	1.31
St. Marys	Ohio	.44	.80								T.			.29										.02	.10								1.65
Smithfield	Fish'g Creek		.81																								.94				.17		1.92
Spencer	L. Kanawha	.12	.17							.06													T.	T.	T.						.53		0.88
Sutton	G. Kanawha	1.00																												T.		.34	1.34
Terra Alta	Monongahela	.12	T.	T.						T.	T.									T.				1.35			.80				T.	.40	2.67
Union	G. Kanawha	.70																		.05					.08			.01			.18		1.02
Webster Springs	do	.22	.08							T.										.70				1.00									2.00
Wellsburg	Ohio	.20	.03							.05			T.										T.	T.						.03		.71	1.02
Weston	Monongahela	T.	.70	.06		T.																T.			.10								0.86
Wheeling	Ohio	.30	.05							.07	.01										T.			.10	.03						.23	T.	0.79
Williamson	Big Sandy	.94	.02								T.											.16	.16	.02	.76						.02		2.08

TABLE 2.—*Daily precipitation for May, 1911. District No. 3*—Continued.

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Ohio.																																	
Amesville	Ohio	.41								.06														T.								.63	1.10
Bangorville	Muskingum	.44	T.							.04	T.	T.	.67									.24		.03					.55	.18	.33	.29	2.77
Bellefontaine [1]	Great Miami	.20	.42							T.	T.		.08									.16	.18	.04						.57	T.	.36	2.01
Cadiz	Ohio	.35	T.	T.						.05			T.							.32	T.							T.		T.	.56	1.28
Cambridge	Muskingum	.33																				.15		.47								.81	1.76
Camp Dennison	Ohio	.45	.02							.02		.22	.10							T.	.01	.12	.15	T.					.06			.73	1.88
Canal Dover	Muskingum	.21	T.							T.			.04									.04		.34							T.	.33	0.96
Canton [1]	do	.30	.15	.02						.03			T.	.01						.05			.01	.71	.10								1.38
Cardington	Scioto	.24								.03		.83	.13										.06	.07					.08		.32	.27	2.03
Cincinnati	Ohio	.13								.02		.01	.08									.13									1.14	.03	1.54
Circleville [1]	Scioto	.60	T.	T.						.04												.09	T.	.25								.02	1.00
Clarington	Ohio	1.00	.01							.01													T.	.06						.10		.50	1.68
Columbus	Scioto	.29	T.							T.		.01	.13							T.	.10		.13	.05					.12		.05	.27	1.15
Coshocton [1]	Muskingum	.20	.30																			.13		.45	.20							.08	1.36
Dayton [1]	Great Miami	.70	.39							.03			.10									.07	.05	.45						.18		.04	2.01
Delaware	Scioto	.40	T.							.07		.82	.06								T.	.03		.13					.29		.41	.53	2.74
Demos	Ohio	.44	.01	T.						.04	T.									T.	T.	.02		.08						.01	T.	.38	0.98
Dennison	Muskingum	.28								T.			T.							.05		T.		.36							.04	.93	1.66
Frankfort	Scioto	.62																			T.			.30								.35	1.27
Garrettsville	Mahoning	1.07	.04							.06	.18		.45						T.	T.				.43	.15							.66	3.04
Granville [1]	Muskingum	.20	.15	T.						.07	T.	T.	T.	.05								.35		.11								.15	1.08
Gratiot	do	.28	T.							T.										T.		.12		.23	T.						.03	.88	1.54
Green	Ohio									T.	T.										T.	T.	.10								T.	0.10
Green Hill	Muskingum	.08	T.	T.						T.			T.						.08	T.			.15	T.					T.		T.	.32	0.63
Greenville [1]	Great Miami	.50	.08							.02			.04										T.	.26	.02					.19		1.17	2.28
Hillsboro	Scioto		T.							.32											T.	.33	T.								.98	1.63
Ironton	Ohio	.11								.06											.28			.38							.04	0.87
Jacksonburg	Great Miami	1.25							.07				.20					T.			.10		.11					.20	T.	T.		1.93
Kenton	Scioto	.66										.18										.12							.41		.40	.27	2.04
Killbuck	Muskingum	.24	T.							.02										.36		.26		1.00	T.						.10	.52	2.50
Lancaster	Ohio	.35								T.			T.								.35	.05		.12							T.	.39	1.26
McConnelsville	Muskingum	.40	T.	T.									T.							T.	.40		.02	.17								.56	1.55
Marietta	Ohio	.83								.03											.37	.36		.15						.29		.70	2.73
Marion	Scioto	.52																		T.		T.		.15					.27		.63	.45	2.02
Milfordton	Muskingum	.36										T.	.05								.15		T.								.25	.23	1.04
Milligan	do									.07												.21		.32								.58	1.18
Millport	Ohio	.13	T.	.02						T.			T.							T.				.20							T.	.33	0.68
Nellie	Muskingum	.45											.05									.20		.63					.27		.35	1.95
New Alexandria	Ohio	1.75	T.																	T.												.70	2.45
New Berlin	Muskingum	.58	.05								.05		.09						.20	.26				1.30	.05						T.	.43	3.01
New Waterford	Ohio	T.								T.	.15		T.							T.				.43							T.	.38	0.96
Ohio State Univ	Scioto	.40	T.							.03		T.	.10								T.	T.		.13					T.		T.	.34	1.00
Pataskala	Muskingum	.34	T.							.05		.11	.17								.29	.08		.07						T.	.06	.20	1.37
Peebles [1]	Ohio	.54	T.							.01	.01											.04		.15								.14	0.89
Philo (1)	Muskingum	.04								.02												.24		.32								.63	1.25
Piqua [1]	Great Miami	.56								T.												.35									.08		0.99
Plattsburg	do	.57	T.										.20	.08							T.	.83							.10		.03	.22	2.03
Portsmouth [1]	Ohio		.31			T.				.01											.05	.30	T.	.22							T.	0.89
Prospect [1]	Scioto		.02	1.45																											.54	.26	2.27
Rittman	Muskingum	.84		T.							.04	T.								.14	T.		.36		.65				.61		T.	.32	2.96
Shenandoah	do	.45		T.						T.		.12										.12		.07							.04	.46	1.26
Sidney	Great Miami	.53										.10	.06									T.	.12	T.							.46	.40	1.67
Somerset [1]	Muskingum	.43	T.							T.	.03											.25		.30	T.							.47	1.48
Springfield	Great Miami	.71	T.							.02		.36	.05							T.			.29	.05					.05		T.	.27	1.80
Summerfield	Ohio	.53	T.																			.31		.13								.88	1.85
Syracuse	do	.58	T.							.10		T.									T.			.26						.55		.62	2.11
Thurman	do	.40								T.											T.		T.	.76								.73	1.89
Urbana	Great Miami	1.31								T.			.04								.11	.09	.04							.21	.49	.28	2.57
Warren	Mahoning	.65	T.			.08				.06	T.		.18											.43	T.				.12			.64	2.16
Waverly [1]	Scioto	.42	.02							T.												.61		.25								.63	1.93
Waynesville	Great Miami	.66																			.84	.05	.08							.01			1.64
Wooster	Muskingum	.60	.01							.03			.02							.23		.15		.86	.01						T.	.54	2.45
Youngstown [1]	Mahoning	.07	.16							.02	.02	.07		T.								.67		.07	.05							.02	1.15
Zanesville [1]	Muskingum	.83	T.	T.						T.	T.											.25	.10	.40	.02							.10	1.20
Virginia.																																	
Big Stone Gap	Tennessee	.30	T.											.25							T.			.20								.80	1.55
Blacksburg	Kanawha	.19							.04	T.				.02										.44			.20				.01	.85	1.75
Burkes Garden	Tennessee	T.	.13											.28																		.66	1.07
Elk Knob	do	.02												.26					T.		.08			.38	T.						.08	.16	0.98
Ivanhoe [1]	Kanawha	.25	.10												.92										.15			.08				.34	1.84
Lebanon	Tennessee	.07	.21											.21							T.			.34								.05	0.88
Max Meadows	Kanawha											T.		.44												.25							0.69
Radford [1]	do	.27	.30												.42										.38			.30					1.67
Speers Ferry [1]	Tennessee	.82	.30																			.20		.08									1.40
Wytheville	Kanawha	.07							T.			T.		.44					.01					T.			.25					.69	1.46
North Carolina.																																	
Andrews	Tennessee	.33	.01															.01	.03		.06	.69		.49								.13	1.75
Asheville	do	.03			.02					T.				.01					1.11	.08	1.03			.18	.01				T.		.01	.21	2.69
Banners Elk	do	T.			.10							.10			1.32				.04		.22			.13	.12						.02		2.05
Brevard	do	.62			T.																.67			.30							.30	.35	2.24
Bryson City [1]	do	.05	.16																			.42		.06	.02								0.71
Cullowhee	do	.22	T.		T.	.13								.03				T.	T.	T.	T.	.20		.04				.17		.22		.82	1.83
Hendersonville	do													.70							.21			.97							T.	1.88
Hot Springs	do													.10						T.	T.			.37								.07	0.54
Jefferson	G. Kanawha		.84		T.					T.			1.04						.03		.19			.09								.12	2.31
Marshall	Tennessee				T.																T.	T.		.22					T.			.10	0.32
Murphy [1]	do	.09	.25				T.												.02	T.		.49		.51	.30								1.66
Rock House	Savannah	.29			.09	.35								.05				T.	.17	.13	.46		T.	.84				.32			.21	T.	2.91
Waynesville [1]	Tennessee	.05	.05			.06					T.				T.				T.	.43	T.	.18			.04				.07	.05		.05	0.98
Georgia.																																	
Diamond	Tennessee	.55																T.		T.	.20	.45	T.	.82						T.	T.	.12	2.14
Lafayette	do				.20																.95	.45	.43	.47							T.	2.50

TABLE 2.—*Daily precipitation for May, 1911. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Alabama.																																	
Bridgeport	Tennessee	.40													T.				.02		.06	1.05	1.16	.30									2.99
Decatur	do	.31																			.12	1.78	.32	.16									2.69
Florence	do	.22																				.76	3.17	.16									4.31
Guntersville	do	.42																			.40	.90	.31	1.24									3.27
Madison	do																			.05	.80	.15	.10									1.10
Riverton	do	T.													.30						.07	.43	.64										1.44
Scottsboro	do	.20												T.				T.		T.	.26	.10	.50	.16								.07	1.29
Tuscumbia	do	.30																			.05	.44	1.74	.05									2.58
Tennessee.																																	
Ashwood	Tennessee												.30							.20	.43	.55	.87								.51		2.86
Benton	do	.15																T.	T.		1.23	.55	.20	1.32								.18	3.63
Bird's Bridge	do	.84													.07										.18								1.09
Bluff City	do	.54	T.												T.										.44						.02	.20	1.20
Byrdstown	Cumberland													25							.46	.10	1.56										2.37
Carthage	do																					.40	1.10	.36									1.86
Cedar Hill	do	.20												T.						.30	.40	.10	1.10								.20	.22	2.52
Celina	do														.18							.53	.16	T.									0.87
Center Point	Tennessee												T.	T.								.50	.28										0.78
Charleston	do	.12	.08																			.65	.15	1.55									2.55
Chattanooga	do	.07																			.63	.08	.92	.02								.09	1.81
Clarksville	Cumberland	.29											T.							T.	.77	T.	.34								T.		1.40
Clinton	Tennessee	.18	.02																			.10		.63							.27		1.20
Dandridge	do	.34	.10																		1.60												2.04
Decatur	do	.22																		.28	.08	.86	.08	.86	.01								2.39
Dickson	Cumberland																				.34	.10	.83										1.27
Dover	do	.45											T.							T.	.26	T.	.36							T.			1.07
Dunlap	Tennessee																				.40	.13	1.29	.62							.04		2.48
Elizabethton	do	.80													.01										T.							.41	1.22
Erasmus	Cumberland	T.								T.				T.				T.	.02		.41	.34	.30	.06								.21	1.34
Florence	do	.08																	T.	T.	.76	1.97	1.62										4.43
Franklin	do	.02																				.16	.52										0.70
Halls Hill	do	T.																				.75	.31	.35									1.41
Harriman	Tennessee	T.												T.					T.		T.	.41	T.	1.09								T.	1.50
Hohenwald	do												.25								.55	.99	.20								.35	2.3
Iron City	do		.10											.41						T.	.95	.02	.92										2.40
Jefferson City	do	.05								.07				.02							.10	.20	.11	.20								.17	0.98
Johnson City	do	1.20	.06												.24							T.			.40							.13	2.03
Johnsonville	do	.30																		T.	.59	.02	.68										1.59
Kingston	do		.03																	.13		.19	T.	.93									1.28
Knoxville	do	.04								T.				T.					T.		.23	.01	.39	.22						.22		.12	1.23
Lebanon	Cumberland	T.	.03										T.						.03		.60	.37	2.20								T.	T.	3.29
Lewisburg	Tennessee	.05																		T.	.50	.40	1.95	.03								.03	2.96
Livingston	Cumberland																				.28	T.	.71										0.99
Loudon	Tennessee		.08								T.									T.		.48		.86									1.42
Lynnville	do	.50																		T.	.55	.40	1.05										2.50
McGhee	do																			T.		.43		.40									0.83
McMinnville	Cumberland	.01	T.																		.87	.17	1.98										3.03
Maryville	Tennessee	.06																				.55		.30						T.		T.	0.91
Mountain City	do	.27	.02											30					.08					.53							.10	.41	1.71
Nashville	Cumberland	.05																		.01	.05	1.37	.19	T.									1.67
Newport	Tennessee	.90	.07											T.						.15		.45		.07	.21								1.85
New River	Cumberland	.92																		T.		.45	.81								1.01		3.19
Palmetto	Tennessee	.05																		T.	1.00	.90	2.10								T.	T.	4.05
Pinewood	do	.05																		.22	.37	.23											0.87
Pope	do																			*	*	*	1.74										1.74
Rogersville	do	.62	.10								T.				.13						.06			.09	.04									1.04
Rugby	Cumberland													22					T.		.28	.32	.23	.25								.13	.11	1.54
Savannah	Tennessee													30	.40				T.			.70										T.	1.40
Sevierville	do				.01																.85	.28	.04	.08								.15	1.41
Sewanee	do																				*	*	2.02						.09			.05	2.16
Sparta	Cumberland	T.								T.											.62	T.	.90						.10				1.62
Springdale	Tennessee																					.37	.65			T.	T.			.23			1.25
Springville	do	.58											.03							T.			.23	T.							T.		1.34
Tazewell	do	.87													T.							.10	.11	.92							.58		2.58
Tullahoma	do	.10																			1.89	.03	.73										2.75
Walling	Cumberland																						.45	.75	1.15								2.35
Waynesboro	Tennessee														.20					T.	.55	.11	.30									T.	1.16
Wildersville	do	.32																				.30	.30										0.92
Worsham	Cumberland	.07											.08						.37		.10	T.	1.40	1.70									3.72
Yukon	Tennessee																				1.70	1.28	.20									T.	3.18
Kentucky.																																	
Alpha	Cumberland	T.								T.				.81							.58	.30	2.53							.35	.12		4.69
Anchorage	Ohio	1.15								.1[illegible]											1.34	.10	1.10						T.		T.		3.84
Bardstown	Salt	2.25	T.							T.												.27	.05	.67						.05		.04	3.33
Beattyville	Kentucky	.78	T.							T.				.06						T.		.12		.20								.04	1.20
Beaver Dam	Green	3.05		T.							T.			T.							T.	.77	.74	.18									4.74
Berea	Kentucky	.02	.09							T.												.02	.18									.33	0.64
Bowling Green	Green	1.40												.25	.10					.30		.05	1.25	.70									4.05
Burnside	Cumberland	3.28									T.			.02	.20							.12	.20	.27							.24		4.53
Calhoun	Green	.60	.08	T.										T.						T.	1.15		1.09									T.	2.92
Catlettsburg	Big Sandy	.20	.06							.04	.04											.18		.60									1.12
Earlington	Green	2.10	T.											.25							.09	.67	.07	.25									3.43
Edmonton	do	.10								T.			T.	.32						.03	.10	T.	2.10						42				3.07
Eubank	Cumberland	1.35												.70	.14								.10	.37							.05		2.71
Falmouth	Licking	.75																					.98									.36	2.09
Farmers	do																														.35	.39	0.74
Frankfort	Kentucky	.80								T.	T.											.28	.35	.35								.42	2.20
Franklin	Green	.07												T.						T.		T.	.37	.89							T.	.33	1.66
Greensburg	do	1.65	.24											.09	.05							.15	.48	2.00									4.66
High Bridge	Kentucky	1.54	.10	.01						.03	.01												.84	.18									2.71
Hopkinsville	Cumberland	.90												.10							.20	.75	.05	.90								T.	2.90
Irvington	Ohio	2.00																			.09	T.	2.19					.35		T.		.19	4.82
Leitchfield	Green	.22												.03						.01	.16	.12	*	1.05									1.59
Lexington	Kentucky	.01	.01																		.04	.56	.10								.06	.29	1.07
Loretto	Salt	.18												T.							.35	.25	.33						.23			T.	1.34
Louisville	Ohio	.93	T.		T.				.05		T.	T.	T.						T.	T.	.25	.05	.76						T.		.04	T.	2.08
Marion	do	.61											1.43								1.09	T.	.40								.22	.18	3.93
Maysville	do	.07	.01							.02												.20	.18	.75										1.23
Middlesboro	Cumberland	.11								.03				.05							.10	.03	.03	.82						.10		.37		1.64
Mount Sterling	Licking	.73	.26							T.	.03											.17	.04	.19								T.		1.42
Owensboro	Ohio	2.26	T.								T.		.02	.20							T.	.62	1.20	1.20								T.		5.50
Owenton	Kentucky	.70																				.59	.77						T.		.29		2.35

TABLE 2.—*Daily precipitation for May, 1911. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
***Kentucky*—Contd.**																																	
Paducah ‖	Ohio	.90																				.30	.30	.10							T.	1.60
Paintsville	Big Sandy	T.								T.											T.	T.	T.	.31							.37	0.68
Pikeville ‖	do	.30	.12																						T.							0.48
Richmond ‖	Kentucky	1.12	.14							T.												.09	.28	.32								1.95
St. John ‖	Salt	1.70								T.	T.									.25			.38	.34								2.67
Scott	Licking	.58								.03		T.	.07							T.	T.	.13	T.						.25		1.32	2.38
Shelby City	Kentucky	.21	.03							.04												.10	.25							.06	.17	0.86
Shelbyville ‖	Salt	.70	.10							.05												T.	.40	.99								2.30
Taylorsville	do	.64	.01							.09											.49	.12	.78						T.		.03	2.16
Williamsburg ‖	Cumberland	1.32									.03			T.	.80						T.	.23		.88	T.							3.26
Williamstown ‖	Licking	.47	.05																			T.	.30	.03						T.	.30	1.15
Indiana.																																	
Anderson	West Fork, White.	.09	T.	T.						.15		.01	.01								.03	.35	.47					.03	.53	.10		.23	2.00
Attica ‖	Wabash	.03								.06										0.6	.08		.08	.31						.08	.01		0.71
Bloomington ‖	West Fork, White.	.34	.04							.20			1.20									.99	.26	.88							.06	3.97
Butlerville	East Fork, White.	2.47								.15			.17								.18	.27	.66					.32	.18		.50	4.90
Cambridge City ‖	Whitewater	.45	.02							.07			.33									.01	.32	.33						.02		.07	1.62
Columbus ‖	East Fork, White.	.43	.01							.07			.20								.04	.19	.38	.54							.16	2.02
Connersville	Whitewater																					.20	.30									0.50
Crawfordsville	Wabash	T.								.30									T.	T.	.1		.85									1.31
Delphi ‖	do	.02	T.	T.						.46										.14	.04	T.	.05	.67	.01					T.	T.	.75	3.14
Eminence	West Fork, White.	.73	T.						T.		T.	T.								.10		.40	.60									1.83
Evansville	Ohio	.01	.01							.02		.18	.34								.16	.01	.15								.41	.01	1.30
Farmersburg	Wabash	.13								.34		T.								.03			.55								.03		1.08
Farmland ‖	West Fork, White.	.08	.27							T.			.30									.14	.35	.15							.35	.05	1.69
Greenfield	East Fork, White.	.17								T.	.26	.50	.15								.11	.61	.50						T.		T.	2.30
Huntingburg	Wabash												.22								.60		.97									1.79
Huntington	do									T.									.70		.03	.03	.25						.60	1.13	.85	3.59
Indianapolis	West Fork, White.	.01	T.						T.	.12		.01									.29	.19	.29								T.	T.	0.91
Jeffersonville	Ohio	.70								.08			T.								.48	.05	.80	T.							.14	T.	2.25
Judyville	Wabash	.08																		T.		T.	.54	T.							T.	T.	0.62
Kokomo	do	T.	T.							.26									.32		.46	.06	.97						.07		.27	.05	2.46
Lafayette ‖	do	T.	T.	T.						.03	.44									.01	.44	T.	.01	.88	T.						T.	T.	2.21
Logansport ‖	do									.20										.24	.39	.06		1.30							.22	.44	2.85
Madison	Ohio	.30								.07			.06								.32	.36	.56									.63	2.30
Marengo	do	2.00								.08		.01		.14							.34	.49	.30								.09	.07	3.52
Marion ‖	Wabash	T.	T.	T.						.06												.04	.14	.30						.01	.17	.27	0.99
Mauzy	East Fork, White.	.53	T.							.13	.15	T.	.01								.02	.82	.47							T.	.09	.17	2.39
Monticello ‖	Wabash	.41								.29									.01		.18		.32	.65						.40	.74	.25	3.25
Moores Hill	Ohio	1.00								.03		.15									.06		.51						.02	T.		.40	2.17
Mount Vernon ‖	do	2.52											.04									.03	.45	.10								.22	3.36
Paoli	East Fork, White.	1.12	.04							.10		.05	.12								.98	.33	.29							.04	.58		3.65
Princeton	Wabash		.02									.19									.21		.51								.05		0.98
Richmond	Whitewater	.61								.08		.12									T.	T.	.20						.67		.12	.32	2.12
Rochester	Wabash	.07	.02							.06											.13	T.	2.15	T.						.10	.40	.24	3.17
Rockville	do	.02								T.		T.	T.								.13		.37						.28	.05			0.85
Rome	Ohio	.62	.03	T.									.05							T.	.13	.26	.38	T.							.03	.02	1.52
Salamonia	Wabash	.07	T.	T.						T.		.35											.20							.15	.13	.59	1.49
Salem	Ohio	1.85								.27			.12								.16	1.40	.46								.10	.02	4.38
Scottsburg	East Fork, White.	1.30								.10			.12								T.	T.	.65						.20		.26		2.63
Seymour	do	1.43	.03							.15		T.	.11								.37	.72	1.23							.04	.48		4.56
Shelbyville	do	.51								.15	T.	.03	.25								.03	.35	.63						.19	.22	.08	.02	2.46
Shoals ‖	do	.64	.02							.01			.02									.66	.52	.80								.63	3.33
Terre Haute	Wabash	.08								.18											T.		.18								T.	.02	0.46
Veedersburg	do	.03	.02																.50	.05	.06		.41	.01							T.	T.	1.08
Vevay	Ohio	.70											.02								.85	.10	2.10	.10							.90	.20	4.97
Vincennes ‖	Wabash	.60	T.							.10			1.10									T.	.40	.15								2.50	4.85
Whitestown ‖	West Fork, White.	.05	.03							T.	.57		.02									.19	.20	1.32						T.			2.38
Winona Lake	Wabash	.09		.02						.09									T.		.51	T.	.27						.25	.42	.49	2.14
Worthington	West Fork, White.	.25							.35		.54	.11									.20		.43								.19	.03	2.10
Illinois.																																	
Albion	Wabash	.31	.01									.10								.04	.15		.41								T.	.12	1.14
Charleston	do								.01												.15	.22	.13								T.	.01	0.52
Danville	do	.13	T.							.01									.01	T.			.46						.08	.04			0.73
Equality	Ohio	.30		T.								.66									.12	T.									T.	.11	1.19
Fairfield	Wabash	.34											.56																		T.	.30	1.20
Golconda	Ohio	.07		T.									.36					T.	T.	T.	.09		.30									.17	0.99
Hoopeston	Wabash	.08								.01										T.	1.17	.11	.45	.04						.07	.33		2.26
McLeansboro ‖	Ohio												.29									.14	.10	.18								.15	0.86
Mount Carmel ‖	Wabash	.74	T.							T.			.16								.10	.06	.46	.14							.34	2.00
New Burnside ‖	Ohio	1.22											.40									T.	.16								T.	1.78
Olney	Wabash	T.							.06	T.		.49								.04	.02		.21								.81	.10	1.73
Palestine	do	.30								.20		.04									T.	T.	.50								.30	.08	1.42
Paris ‖	do	.55								T.												.45	.30	.10							.05	T.		1.45
Philo	do									T.										T.	.16	.11	.05						.30	.22		T.	0.84
Rantoul ‖	do	.30								T.											T.	.80	.30	.08							.43		T.	1.91
Robinson	do	.09							.18			.10								.05		.34	T.							.06	.85	.05	1.72
Sumner	do	.35										.24									.20		.32								.10	.31	1.52
Urbana	do	.08								.53											1.21	.03	.05						.45	.09		T.	2.44

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for May, 1911. District No. 3, Ohio Valley.*

Date.	Pennsylvania.				West Virginia.														Ohio.							
	Greenville.		Pittsburg.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.§§		Morgantown.		Parkersburg.		Wheeling.§§		Canton.		Cincinnati.		Columbus.		Dayton.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	72	59	74	49	80	62	78	54	78	54	81	61	80	62	77	59	77	51	76	61	73	60	72	42	71	37	72	61
2....	60	43	49	36	65	40	75	39	54	34	72	40	48	43	66	37	51	37	42	39	42	35	51	36	45	33	48	35
3....	51	28	49	34	60	34	59	35	51	30	70	29	63	37	53	33	57	38	59	36	54	34	56	40	53	35	56	34
4....	57	28	55	41	63	40	63	42	56	29	68	31	63	38	57	34	59	35	65	33	60	38	61	39	59	40	62	33
5....	62	23	59	35	65	38	64	35	58	28	69	29	66	36	60	32	61	37	70	33	66	33	64	42	62	42	65	33
6....	68	27	68	38	70	38	67	33	67	28	74	31	71	37	64	35	68	39	75	35	74	35	68	44	68	44	70	35
7....	75	30	74	42	75	42	69	35	70	32	74	34	75	40	69	38	74	42	83	37	77	39	74	47	73	49	76	38
8....	79	34	78	47	77	48	70	37	70	42	79	41	78	47	71	46	76	49	84	40	80	43	78	50	76	53	79	42
9....	79	40	74	50	78	49	73	35	64	43	77	41	76	47	69	48	74	50	78	45	79	51	82	59	77	60	79	57
10....	82	43	80	58	88	53	85	48	83	48	89	46	88	53	83	56	88	54	92	52	86	56	85	63	84	61	85	58
11....	87	50	87	66	91	57	88	53	88	50	94	50	89	55	86	62	90	59	92	54	87	60	86	65	85	63	85	61
12....	79	56	77	64	90	57	88	53	83	50	93	52	84	55	86	65	83	58	84	56	78	60	79	62	77	61	80	60
13....	67	39	68	49	85	57	81	55	77	50	83	52	79	57	83	43	72	57	79	42	71	44	76	57	69	48	76	48
14....	79	34	81	46	87	50	83	47	81	43	89	43	84	48	85	61	83	49	86	40	80	41	80	49	79	43	79	42
15....	87	44	85	61	89	56	84	49	84	51	93	50	88	56	85	63	89	59	93	41	88	53	87	59	87	60	88	50
16....	85	60	86	62	90	58	87	50	84	52	93	53	89	58	87	74	89	62	97	56	88	58	88	62	88	63	90	54
17....	83	50	86	66	90	62	88	53	86	54	95	56	88	60	87	73	90	65	92	56	89	64	88	64	88	67	90	58
18....	88	60	87	69	91	65	89	52	89	54	96	56	92	63	89	60	93	65	96	59	92	65	91	65	90	68	92	61
19....	94	59	92	69	94	66	91	60	87	55	96	57	93	64	93	75	94	68	98	62	92	69	92	71	91	70	91	64
20....	92	58	92	72	94	64	89	59	90	54	99	57	91	65	92	68	94	71	99	62	91	66	85	70	88	68	88	68
21....	91	59	92	71	92	65	89	56	92	56	98	60	89	64	91	72	91	66	97	63	90	66	86	67	87	65	85	65
22....	93	60	93	72	92	63	88	57	90	57	97	57	90	64	90	66	93	65	98	63	91	67	81	68	90	67	86	62
23....	83	60	80	66	85	67	84	58	77	59	87	60	82	67	78	63	82	67	85	63	79	64	85	67	83	66	84	65
24....	77	54	78	66	84	65	82	55	79	56	86	60	85	62	79	62	81	65	86	59	81	58	84	62	80	61	83	53
25....	81	49	80	58	88	60	84	49	81	47	89	59	89	55	81	54	88	59	90	53	85	55	92	62	91	61	95	56
26....	89	52	89	65	93	65	87	54	86	54	96	58	93	65	89	60	93	69	95	56	90	62	95	72	94	70	95	64
27....	91	52	87	66	93	65	89	56	83	54	95	55	92	60	86	63	91	68	95	60	93	61	95	69	94	69	98	59
28....	95	52	92	65	94	62	89	54	85	51	97	53	92	62	92	71	92	67	100	57	95	61	95	69	94	70	98	63
29....	85	61	88	67	93	59	88	53	89	55	95	57	92	63	88	62	90	63	94	60	87	67	88	69	90	66	89	66
30....	86	55	83	62	88	61	88	56	85	57	91	59	89	60	85	54	86	62	88	58	79	57	84	65	78	60	79	60
31....	80	50	76	59	88	65	85	58	76	58	82	63	89	69	77	58	79	63	79	60	80	58	83	67	81	60	82	62
Mns..	79.9	47.1	78.7	57.2	84.3	55.9	81.4	49.4	78.2	47.9	86.4	50.0	82.8	55.2	79.9	56.4	81.5	56.7	85.4	51.3	80.5	54.2	81.0	58.8	79.7	57.4	81.5	53.8

Date.	Ohio.				Virginia.				Asheville, N. C.		Decatur, Ala.		Tennessee.														Beattyville, Ky.	
	Marion.		Waverly.		Big Stone Gap.		Wytheville.						Chattanooga.		Johnson City.		Knoxville.		Nashville.		Palmetto.		Sparta.		Waynesboro.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	70	47	78	61	77	48	75	52	69	61	80	67	80	56	79	55	79	57	74	48	78	56	80	64	75	56	81	56
2....	48	32	47	38	68	46	60	39	62	42	62	45	62	48	60	50	57	45	58	45	60	46	64	45	62	46	49	40
3....	54	29	62	32	62	32	59	30	62	36	69	45	68	43	66	33	64	39	65	40	67	36	66	34	67	36	66	29
4....	60	34	64	31	65	48	62	44	63	43	71	45	70	51	65	37	67	50	67	48	70	43	68	42	69	45	68	37
5....	65	32	68	32	69	35	60	35	59	45	71	45	68	52	67	41	66	47	69	49	69	35	69	38	69	37	69	32
6....	72	36	71	34	69	36	65	34	66	37	76	45	72	46	72	39	71	45	73	44	75	36	74	38	75	35	74	31
7....	78	38	79	37	73	37	69	34	68	39	78	44	78	46	74	41	76	45	78	47	79	39	78	38	75	35	78	34
8....	80	42	83	41	76	46	62	48	68	44	83	44	79	49	76	46	77	49	80	49	82	41	79	39	75	38	79	37
9....	81	56	85	48	75	42	67	48	69	50	87	46	83	51	73	48	79	50	86	53	87	48	85	45	79	38	82	41
10....	88	58	91	53	84	50	79	48	84	50	89	53	87	63	89	49	87	56	86	64	86	58	89	51	85	45	88	49
11....	85	60	92	52	83	51	83	50	87	54	89	55	89	62	90	54	88	61	86	65	86	58	86	62	85	45	89	47
12....	81	60	82	57	84	52	82	53	85	53	80	59	86	62	88	54	86	62	85	61	87	57	90	50	84	55	89	47
13....	72	42	82	50	78	56	79	51	83	55	89	58	82	60	83	55	74	61	85	63	88	56	83	53	86	55	82	52
14....	81	38	87	45	82	49	75	48	75	52	88	57	84	59	83	53	84	56	86	58	88	50	87	55	85	63	88	43
15....	89	62	94	51	81	54	79	49	76	55	91	58	85	63	90	54	84	62	87	60	89	58	90	50	84	53	90	48
16....	89	56	93	55	85	50	85	47	83	48	93	60	83	62	90	52	87	58	88	62	89	59	92	55	88	54	93	51
17....	91	60	.....	58	85	55	86	55	87	55	91	63	90	64	95	56	90	64	90	66	92	61	90	58	89	58	92	53
18....	93	66	95	58	85	57	85	59	85	59	94	65	90	68	95	60	91	66	93	66	95	63	90	61	91	59	94	56
19....	94	65	95	61	88	61	85	58	81	57	85	67	83	69	95	61	88	67	84	67	87	68	86	60	84	62	96	59
20....	95	66	90	61	86	60	84	57	74	60	87	69	76	64	92	64	83	67	77	64	80	64	86	62	78	65	91	58
21....	91	64	94	62	88	60	84	57	77	62	86	63	77	64	95	61	87	64	82	62	84	64	85	60	79	62	89	58
22....	92	60	91	64	85	56	84	54	77	57	80	65	80	65	92	60	85	65	76	66	75	62	85	62	82	65	91	60
23....	87	65	87	67	80	65	75	57	74	61	85	65	83	65	81	66	80	64	87	64	85	61	83	62	86	68	88	62
24....	83	61	86	56	82	58	80	60	80	58	88	61	88	60	82	61	85	59	88	62	87	59	86	55	88	54	91	53
25....	94	62	94	54	85	53	80	52	82	55	91	62	89	63	89	58	88	59	91	64	91	63	90	56	91	56	89	52
26....	98	63	98	62	88	58	86	61	86	59	96	63	92	66	95	60	92	66	94	65	92	62	91	62	92	58	97	56
27....	101	61	93	60	88	58	79	55	87	60	96	65	95	66	96	61	93	67	95	65	94	63	95	55	94	58	92	55
28....	100	67	98	59	89	57	82	54	83	58	97	65	92	70	92	60	91	68	96	69	95	65	94	61	95	61	96	57
29....	86	65	93	62	90	54	84	50	85	55	97	67	92	68	92	57	92	65	95	68	94	65	93	60	95	60	93	52
30....	80	56	91	60	89	59	85	56	84	57	96	66	92	70	94	62	90	65	95	69	95	64	95	61	96	60	93	59
31....	77	60	86	66	85	60	83	56	84	56	96	66	92	67	89	60	89	65	90	69	91	66	91	65	95	63	91	63
Mns..	82.5	53.0	85.0	52.5	80.8	51.7	76.9	50.0	76.9	52.7	85.8	57.9	82.8	60.1	84.5	53.8	82.3	58.5	83.4	59.4	84.4	55.7	84.5	53.5	83.2	53.1	85.4	49.3

TABLE 3.—*Maximum and minimum temperatures for May, 1911. District No. 3*—Continued.

Date.	Kentucky.														Indiana.												Philo, Ill.	
	Bowling Green.§§		Earlington. §§		Greensburg.§§		Lexington.		Louisville.		Maysville. §§		Williamsburg.§§		Butlerville.		Evansville.		Indianapolis.		Kokomo.		Rockville.		Worthington.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	69	60	67	62	72	59	72	47	70	46	78	62	82	58	70	48	64	45	63	35	69	40	67	43	68	47	65	39
2....	58	42	58	41	56	39	47	36	53	39	53	39	54	44	54	36	55	41	51	35	49	31	52	37	55	38	55	34
3....	66	35	64	34	66	32	57	36	61	41	62	33	67	31	58	33	58	42	54	37	55	30	50	34	59	32	57	31
4....	68	40	67	38	65	34	59	42	64	43	65	33	67	42	63	32	64	43	61	41	62	34	55	38	64	33	64	34
5....	72	39	72	36	67	33	61	41	66	44	69	34	67	35	65	34	65	45	64	40	64	29	56	36	67	33	66	33
6....	78	39	76	36	72	33	66	44	70	47	75	35	76	33	69	40	71	48	69	48	71	33	61	42	73	37	71	36
7....	81	42	82	39	76	35	72	49	76	49	79	37	72	40	77	40	76	50	75	50	76	42	65	42	82	42	77	39
8....	82	43	89	42	80	37	75	53	81	50	82	42	78	36	82	42	80	54	79	52	80	45	71	49	85	58	81	42
9....	88	48	89	49	85	38	79	58	84	60	85	45	80	43	86	55	86	62	84	58	80	55	84	59	84	58	87	59
10....	88	56	88	57	88	50	84	63	87	66	90	54	91	55	86	61	82	63	83	63	84	62	82	60	83	60	85	57
11....	90	57	89	65	89	51	86	62	87	66	92	55	91	51	83	60	82	66	80	63	80	64	78	62	81	59	78	61
12....	90	57	86	61	86	50	79	59	82	65	84	55	87	50	82	59	82	64	81	59	81	51	80	55	81	55	81	45
13....	86	60	89	60	82	54	78	56	82	60	85	52	79	55	79	55	85	64	77	53	75	45	78	53	82	57	80	47
14....	89	52	89	50	87	45	82	50	83	54	83	43	88	49	80	48	83	59	78	50	81	45	81	54	82	52	84	51
15....	91	55	92	53	90	50	87	63	90	59	94	57	88	48	88	58	88	59	87	58	87	50	87	55	89	51	89	52
16....	93	56	93	60	89	54	88	64	88	63	93	55	90	51	89	58	88	67	85	65	88	56	85	63	87	59	88	56
17....	94	62	94	60	93	58	88	66	91	66	94	57	92	50	89	60	90	69	87	67	90	63	88	65	89	62	90	61
18....	96	63	97	63	94	59	90	69	93	68	97	59	89	58	92	62	90	71	89	69	82	65	89	66	91	64	90	63
19....	90	64	92	69	92	62	89	69	92	72	97	63	92	62	91	69	88	73	89	70	89	66	87	68	89	68	90	69
20....	87	68	78	70	84	.....	86	67	83	70	94	61	88	62	84	68	80	68	84	66	84	68	82	68	81	68	87	67
21....	87	62	86	64	84	62	82	65	87	68	93	61	85	60	84	67	81	66	82	64	82	63	82	65	82	65	82	64
22....	78	62	84	66	70	62	80	66	74	67	92	63	88	54	76	64	77	68	70	62	72	62	75	65	76	66	76	62
23....	88	60	88	60	85	58	82	64	85	66	88	64	85	62	82	62	83	64	79	61	70	60	77	62	81	63	76	58
24....	90	58	96	56	86	55	81	64	86	64	86	57	88	55	84	51	90	63	81	58	74	51	82	55	84	53	86	50
25....	95	60	98	62	85	56	89	63	94	65	95	55	91	56	92	62	94	69	92	65	91	62	92	64	93	62	95	58
26....	97	62	101	59	93	58	92	69	96	72	98	59	94	58	95	60	96	72	94	71	92	61	93	67	94	60	96	60
27....	98	64	101	61	94	59	93	71	96	69	99	60	95	58	97	60	96	71	94	71	95	62	93	67	95	62	95	62
28....	100	64	105	62	95	59	93	69	98	70	97	60	95	58	98	63	98	73	96	68	93	63	93	65	96	64	96	63
29....	98	62	99	64	94	57	91	68	95	68	90	60	94	56	88	60	91	69	89	67	89	63	87	65	88	63	86	60
30....	97	64	99	64	94	60	90	66	92	70	93	64	94	59	86	64	93	69	81	62	79	59	83	66	86	68	83	62
31....	89	62	89	63	87	64	86	66	86	69	90	65	91	63	83	61	85	68	85	60	79	62	86	63	86	63	86	63
Mns.	86.2	55.4	87.0	55.7	83.2	50.8[a]	80.1	58.9	83.0	60.5	86.2	52.9	84.5	51.4	81.7	54.6	82.0	61.5	79.5	57.7	79.0	53.0	78.1	56.5	81.7	55.5	81.4	52.8

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the United States Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT No. 4, THE LAKE REGION.

Prof. HENRY J. COX, District Editor.

GENERAL SUMMARY.

The month of May, 1911, in climatological district No 4 was characterized by mean temperatures decidedly above the normal, by an abundance of sunshine and a deficiency of precipitation over the southern and eastern sections, and by an excess of precipitation over the northern and western sections. The heat was unprecedented in many localities. In fact, not only were the records for high mean May temperatures broken in most portions of the district, but the records of recent years for midsummer maximum temperatures were exceeded in several instances. In southern Michigan and the lower Lake region conditions were favorable for the rapid evaporation of water from the surface of the soil, owing to the great number of clear and partly cloudy days with high temperatures, which, together with the deficiency in rainfall over these sections, resulted during the last two weeks of the month in a situation bordering on drought, especially in northern Indiana, northern Ohio, and the extreme eastern portion of the district. The rains of the last day of the month, however, afforded considerable relief.

Thunder showers were frequent during the periods of maximum heat, and a number of these storms caused extensive destruction of property and loss of life by lightning, and other damage of greater or less extent, due to accompanying high winds and excessive rainfall. The reports show marked coincidences of the occurrence of thunderstorms and rainfall with the culmination of the heat periods. The following table summarizes the chief features of meteorological interest in the various portions of the district:

Portions of States lying within district No. 4.	Mean.					Number of days.				Prevailing wind direction.
	Temperature.	Departure from normal.	Precipitation.	Departure from normal.	Snowfall.	0.01 inch or more precipitation.	Clear.	Partly cloudy.	Cloudy.	
Minnesota	53.2	+3.8	3.52	+0.07	T.	9	12	11	8	ne.
Wisconsin	58.2	+5.2	4.32	+0.68	2.2	11	15	9	7	sw.
Illinois	66.0	+9.5	3.37	0.00	0.1	12	13	10	8	sw.
Indiana	66.6	+6.3	2.14	−1.78	T.	8	19	6	6	sw.
Upper Michigan	53.8	+5.6	3.90	+0.72	0.9	11	13	8	10	w.
Lower Michigan	61.8	+6.3	3.64	+0.27	0.2	9	15	9	7	sw.
Ohio	66.0	+6.3	1.79	−1.84	T.	8	19	9	3	sw.
Pennsylvania	63.0	+5.7	2.49	−0.94	0.2	13	13	13	5	w.
New York	62.0	+6.9	2.31	−1.09	0.7	8	18	9	4	w.
Vermont	61.9	+6.8	1.47	−1.71	0.7	7	16	9	6	s.

TEMPERATURE.

The mean monthly temperatures exceeded their normals by more than 6° over the entire region south of the Lakes, in the Champlain Valley, and in the Canadian Provinces of Ontario and Quebec, decreasing gradually to the eastward and northwestward of these sections. Only a few departures of less than +3° occurred, and these were chiefly at stations on the immediate shore of Lake Superior.

The month opened with an atmospheric depression of considerable intensity central on the western shore of lower Michigan. The temperatures, as a consequence, were from 12° to 16° below the normal over the northwestern sections, and above normal by about the same values over the extreme east. As the disturbance advanced rapidly across the Lake region and passed down the St. Lawrence Valley the cold weather overspread the entire district. During the 2d–5th, under the influence of the following field of high barometric pressure, which moved slowly around the western and southern borders of the Lake region, the lowest temperatures of the month occurred at practically all stations. While frosts or freezing temperatures were general during this period, the advancement of vegetation, although rapid in the warm spell at the close of the previous month, had not been sufficient to admit of serious damage.

A brief cool period occurred on the 13th–14th, due to an area of high pressure moving southeastward across northern Michigan, and light to heavy frosts were reported as far south as the latitude of Detroit. With this exception, and that of a few cool days in the vicinity of western Lake Superior, the daily mean temperatures were above normal in practically all sections after the 6th. Waves of pronounced heat advanced eastward across the district on the 11th–12th, 16th–23d, and 25th–28th, and during these periods many prostrations and some deaths as a result of the hot weather were reported over the regions most affected. The highest temperatures of the month occurred at the culmination of the second of the hot waves over the Lake Superior, New York, and Vermont sections, but in the remaining portions of the district the greatest heat was experienced in the period 25th–28th.

Two stations in Ohio recorded maximums of 100°, while temperatures of from 95° to 99° occurred at numerous stations from Indiana and lower Michigan to New York State, and readings of 90° or over were noted in all sections of the district, except that of Minnesota. The absolute range for the month was 87°, from 13° on the 2d, at Thomaston, in the Upper Peninsula of Michigan, to 100°, at Montpelier and Findlay, Ohio, on the 27th and 28th, respectively. The mean daily range for the district as a whole was 20.2°, but reached an average of 26.1° in the Champlain watershed.

PRECIPITATION.

The rainfall of the month was heavy at a number of places on the northwestern shore of lower Michigan, where several stations received amounts of from 7 to nearly 12

inches. Over the northern half of the Southern Peninsula of Michigan, in the Fox River Valley of Wisconsin, and over the Lake Superior sections, the precipitation was in excess of the normal, while throughout the southern and eastern portions of the district deficiencies amounting to between 1 and 2 inches were general.

There were four periods of widespread precipitation: 1st–3d, when snow fell in many localities; the 8th–11th, 15th–24th, and the 30th–31st. Throughout all these periods thunderstorms were frequent, and much damage occurred in localities. The showers over the eastern sections were generally light, but the electrical energy of many of the storms was quite severe, and several cases of loss of life were reported.

MISCELLANEOUS.

Fog.—Dense fog was comparatively frequent on western Lake Superior, occurring on 11 days at Duluth. It was also reported on 5 days at Marquette, 4 at Houghton, and 2 at Sault Ste. Marie. The distribution on Lakes Michigan and Huron was peculiarly local, dense fog occurring on 5 days at Escanaba and 4 at Milwaukee, while at Green Bay there was only 1 day, and at Chicago and Grand Haven dense fog did not occur during the entire month. Off Port Huron the fogs of the 1st, 9th, and 16th greatly impeded navigation, while no fog occurred at Detroit, and the dates of occurrence at Alpena were the 9th, 16th, 17th, and 21st. Lake Erie was entirely free from fog at its shore stations, except at the extreme eastern end, where it was recorded on 5 days. On Lake Ontario somewhat similar conditions obtained, no fog occurring at Rochester, while 11 days with fog were noted at Oswego.

An aurora was observed at Canton on the 30th, and haze occurred at this station frequently during the first half of the month.

TORNADO NEAR HOWARD CITY, MICH.

By C. F. SCHNEIDER, Section Director, Grand Rapids, Mich.

A tornado of limited extent and duration occurred in the northwestern part of Montcalm County, Mich., about 1.30 p. m., May 22, 1911. The storm's greatest violence was felt on the farm of Mr. Sidney Reynolds, about 2 miles southeast of Howard City, where a barn, granary, and chicken house were destroyed and fruit trees and fences blown over.

The storm was of true tornadic type, having a funnel-shaped cloud that alternately raised and lowered as it progressed. Its direction of movement was from southwest to northeast and the path of greatest destruction was about 150 feet wide.

On the northwest side of the storm's path the trees fell toward the south, while on the opposite side they were blown toward the north, an evidence of the rotary winds that accompany the true tornado.

About half a mile farther on the funnel cloud again dipped to earth for a moment but did little damage.

No lives were lost, but two persons were slightly injured. The property loss amounted to about $1,150.

TABLE 1.—*Climatological data for May, 1911. District No. 4, Lake region,*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota.																				
Cloquet	Carlton	800																		D. P. Tierney.
Duluth	St. Louis	1,133	40	51.3	+ 2.8	81	18	24	2	41	3.45	− 0.02	1.33	0.1	14	8	13	10	ne.	U. S. Weather Bureau.
Floodwood	do	1,257	6																	M. H. Schussler.
Stephens Mine	do	1,500	4	55.2		89	18	19	4	46	3.36		0.96	0	7	20	6	5	w.	Oliver Iron Mining Co.
Two Harbors	Lake	614	17	50.2	+ 2.8	80	19	28	2†	35	4.70	+ 1.34	1.48	0	10	8	10	13	ne.	G. W. Watts.
Virginia	St. Louis	1,434	17	56.0	+ 5.7	89	18	22	4†	48	2.55	− 1.10	0.95	0	6	14	14	3	w.	Oliver Iron Mining Co.
Wisconsin.																				
Appleton	Outagamie	795	10	62.8	+ 8.2	91	25	23	2	37	5.04	+ 1.51	0.93	4.0	11	17	9	5	s.	Wm. O. Thiede.
Ashland	Ashland	647	20	55.0	+ 4.5	92	18	22	2	45	4.79	+ 1.49	1.95	0	9	16	5	10	ne.	Sam Wheeler.
Bayfield	Bayfield	635	2	53.0		82	27	25	2	37	4.62		2.39	T.	13	13	8	10	ne.	John P. Kiel.
Cecil	Shawano	804	13	59.8	+ 6.0	88	26	18	2	44	3.99	+ 1.02	1.21	4.0	9	19	8	4	sw.	Louis W. Schmidt.
Florence	Florence	1,293	20	57.3	+ 6.3	89	25	20	2†	45	4.74	+ 0.98	0.81	1.0	13	13	8	10	nw.	Fred S. Evans.
Fond du Lac	Fond du Lac	800	25	62.6	+ 6.5	89	25	24	4	43	5.36	+ 2.12	2.40	T.	11	16	5	10		Geo. W. Marshall.
Grand River Locks	Marquette	770	15	63.0		91	25	24	2	41	5.14	+ 0.40	1.15	T.	11	24	3	4	s.	Jerry Parkinson.
Green Bay	Brown	617	25	59.6	+ 5.1	88	25	22	2	34	5.72	+ 2.15	1.30	2.0	13	6	15	10	s.	U. S. Weather Bureau.
Iron River	Bayfield	1,096	2	57.0		96	17	24	4	59	4.19		1.92	0	10	21	2	8	w.	Winfield E. Tripp.
Kewaunee	Kewaunee	590	2	52.8		87	17	22	2	42	4.65		1.00	9.0	11	17	8	6	s.	Eugene V. Kimball.
Manitowoc	Manitowoc	616	60	55.6	+ 3.4	86	17†	26	2	38	3.32	+ 0.56	0.90	T.	12	13	6	12	s.	Johanna Lups.
Menasha	Winnebago	764	14								3.95	+ 1.00	0.87	2.0	11	20	6	5	sw.	Geo. T. Allanson.
Menomonee Falls	Waukesha	842	2	62.0		92	27	25	2	40	2.00		0.78	T.	8	20	5	6	sw.	Arthur H. Christman.
Milwaukee	Milwaukee	681	40	59.9	+ 6.3	94	27	31	2	42	1.82	− 1.60	0.84	T.	9	13	9	9	sw.	U. S. Weather Bureau.
New London	Outagamie	762	15	61.0	+ 5.1	90	25†	20	2	41	6.00	+ 1.91	1.70	10.0	10	11	8	12	se.	August H. Pape.
Oconto	Oconto	590	20	59.0	+ 4.9	88	27	19	2	38	5.74	+ 2.14	1.29	6.0	14	9	16	6	s.	Wm. K. Smith.
Oshkosh	Winnebago	744	22	60.6[b]	+ 4.0	90	25	23	2	42[b]	4.64	+ 0.88	1.00	T.	11	18[b]	7[b]	4[b]	sw.	Evan Vincent.
Pine River	Waushara	900	16	62.2	+ 5.6	92	26	23	2	40	5.65	+ 1.63	1.30	2.0	12	13	13	5	sw.	Geo. H. Carpenter.
Plum Island	Door	588	3	50.6		73	28	26	4	30	5.61		0.95	6.0	11	10	8	13	s.	Geo. C. Robinson.
Plymouth	Sheboygan	843	1	60.0		88	25†	25	2	36	2.89		0.72	T.	12	15	10	6	sw.	Paul O. Feldrappe.
Port Washington	Ozaukee	713	18	57.2	+ 4.5	95	25	26	2	45	1.33	− 2.44	0.62	0.5	6	14	6	11	se.	Richard C. Kann.
Racine	Racine	633	14	60.3	+ 5.3	96	25	26	2	44	2.38	− 0.49	0.66	T.	8	18	6	7	se.	Daniel Davis.
Ripon	Fond du Lac	935	1	64.7		90	26	27	2	36[a]	5.72		2.05	T.	10	16[a]	9[a]	5[a]	se.	Ripon College.
Sheboygan	Sheboygan	831	12	57.4	+ 4.9	91	25†	27	2	43	2.29	− 1.30	0.71	T.	11	15	13	3	sw.	Louis C. Meyer.
Sturgeon Bay	Door	600	12	53.2	+ 4.4	86	17	22	3	42	5.69		1.48	9.0	12	13	15	3	s.	Adam N. Dier.
Superior	Douglas	671	2	50.5		82	18	30	1	45	4.67		2.09	0	13	13	8	10	ne.	Edward B. Banks.
Waupaca	Waupaca	857	16	61.3	+ 4.9	95	26	17	2†	49	5.78	+ 1.64	1.05	3.0	15	11	8	12	sw.	James H. Flagg.
Illinois.																				
Chicago	Cook	824	41	65.9	+ 9.4	94	26	33	2	35	3.37	0.00	1.27	0.1	12	13	10	8	sw.	U. S. Weather Bureau.
Indiana.																				
Auburn	Dekalb	874	15	61.4	+ 2.9	96	27	27	3†	42	1.41	− 2.30	0.60		7	19	3	9	sw.	Mrs. Josie B. Kuhlman.
Berne	Adams	849	2	67.2		99	27	31	3	41	1.37		0.39	0	10	17	11	3	sw.	Henry M. Reusser.
Elkhart	Elkhart	801	9	69.2		94	27†	32	2	34	2.06		0.78	0	7	26	3	2	sw.	Dr. Miles Medical Co.
Fort Wayne	Allen	775	15	67.1	+ 6.9	99	27	30	5	41	2.46	− 1.22	0.88	T.	11	16	10	5	sw.	Orion E. Mohler.
Hammond	Lake	598	20	66.6	+ 8.5	98	26	27	2	47	2.54	− 1.50	1.63	0	5	12	11	8		Carson W. Whitney.
Howe	Lagrange	886	6	66.6		95	27	30	3†	42	2.09		1.32	0	5	21	0	10	w.	James E. Zook.
South Bend	St. Joseph	726	18	66.5	+ 6.9	94	27	32	3†	34	1.70	− 2.10	0.76	T.	11	21	6	4	sw.	Henry H. Swaim.
Whiting	Lake	606	2	67.2		96	18	30	2	39	3.47		1.26	0	9	20	6	5	sw.	D. H. Boyd.
Michigan, Upper Peninsula.																				
Baraga	Baraga	623	9	51.4	+ 1.2	83	27	19	12	33	5.50	+ 1.86	1.00	0	7	15	0	16	w.	D., S. S. & A. Ry.
Bergland	Ontonagon	1,300	1								4.24		0.99		10	17[d]	0[d]	10[d]	sw.	Frank McMonigal.
Blaney	Schoolcraft		4																	Dr. S. S. Hackwell.
Calumet	Houghton	1,246	23	53.5	+ 7.6	87	19	24	1	38	4.06	+ 0.75	0.97	T.	13	16	8	7	w.	E. S. Grierson.
Chatham	Alger	875	10	53.2	+ 6.0	88	27	16	3	46	2.62	− 0.44	0.55	1.2	14	14	8	9	n.	U. P. Experiment Sta.
Deer Park	Luce	610	10	53.0	+ 7.3	91	27	21	3	48	1.20	− 2.53	0.80	0	3	14	2	15	w.	Mrs. Sara E. McGaw.
Detour	Chippewa	585	10	53.8		82	20	20	1	44[a]	1.71		0.45	4.0	8	17[a]	1[a]	13[a]	se.	G. C. Reed.
Eagle Harbor	Keweenaw	622	12	53.0	+ 7.3	89	19	28	1†	42	3.13	− 0.18	0.69	T.	15	7	15	9	w.	John Nolen.
Escanaba	Delta	612	38	52.5	+ 2.5	74	27	22	2	27	4.42	+ 1.00	1.48	1.0	11	12	10	9	s.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	10	54.5	+ 4.6	90	26	17	4	51	4.14	+ 0.67	0.81	0.5	11	11	1	19	nw.	W. B. Hatfield.
Grand Marais	Alger	610	10	48.9	+ 3.2	81	27	18	1	30	1.56	− 1.30	0.40	T.	9	14	6	11	w.	Mrs. Lena Truedell.
Green	Ontonagon	622																		T. A. Green.
Houghton	Houghton	668	10	53.8	+ 4.6	92	18	27	2	41	3.96	+ 0.67	1.34	T.	12	10	11	10	w.	U. S. Weather Bureau.
Humboldt	Marquette	1,536	14	56.2	+ 8.9	90	27	16	3	49				1.0		11	5	15	w.	D., S. S. & A. Ry.
Iron Mountain	Dickinson	1,111	10	59.0	+ 7.1	90	27	21	2	45[a]	4.41	+ 1.13	1.22	T.	9	15	10	6	sw.	Chapin Mining Co.
Iron River	Iron	1,504	14	58.6	+ 8.3	89	25	16	2†	49	8.70	+ 5.07	1.20	T.	11	21	10	0	nw.	Victor D. Laing.
Ironwood	Gogebic	1,520	8	56.8	+ 7.1	90	26	19	2	38	2.46	− 0.55	0.56	T.	10	18	7	6	n.	Prof. J. V. Brennan.
Ishpeming	Marquette	1,536	11	57.0[e]	+ 7.7	89	27	19	2	42[e]	2.46	− 1.27	0.50	0.1	13	6	20	5	sw.	Clev'd Cliffs Iron Co.
Isle Royale	Keweenaw	610	4	44.2		65	20†	28	2†	26				0		12	1	18	ne.	J. A. Malone.
Mackinac Island	Mackinac	831	10	51.8	+ 3.8	83	20	20	2	39	6.98	+ 3.31	1.47	2.0	11	3	11	17	sw.	M. I. S. P. Com.
Maple Ridge	Delta		5	54.1		88	27	18	3	47	3.00		0.83	0	9	17	1	13	s.	Herman Johnson.
Marquette	Marquette	734	40	54.2	+ 5.2	91	19	25	2	39	3.06	− 0.26	0.81	T.	12	8	16	7	s.	U. S. Weather Bureau.
Menominee	Menominee	581	12	56.0	+ 5.6	88	27	21	2	40	4.04	+ 1.14	0.98	3.0	10	22	2	7	sw.	C. & N. W. Ry.
Munising	Alger		14	54.8	+ 7.7	92	27	22	3	38	2.61	+ 0.39	0.70	0.3	12	12	8	11	s.	Albert Oas.
Newberry	Luce	773	9	55.2	+ 5.7	84	27	22	2†	37	3.19	+ 1.14	0.78	2.0	13	14	6	11	s.	John Brown.
Powers	Menominee	868	11																	C. & N. W. Ry.
St. Ignace	Mackinac	593	21	52.9	+ 4.5	88	19	21	2†	45	6.03	+ 3.13	2.00	2.5	12	18	10	3	w.	D., S. S. & A. Ry.
Sault Ste. Marie	Chippewa	614	23	53.0	+ 5.3	90	19	22	2	41	4.19	+ 0.94	0.99	3.2	14	10	10	11	se.	U. S. Weather Bureau.
Thomaston	Gogebic	1,347	14	55.2	+ 4.4	92	26	13	2	46	3.23	+ 0.45	1.05	0	8	6	19	6	w.	D., S. S. & A. Ry.
Victoria	Ontonagon	1,263	1	57.1		91	26	19	2	43	4.37		1.59	0	15	17	7	7	sw.	R. S. Schultz, jr.
Watersmeet	Gogebic		2	56.1		90	26	14	2	49	6.19		1.27	0.4	18	3	13	15	s.	B. N. Grant.
Wetmore	Alger	878	14	53.0	+ 5.9	90	27	15	4	51				1.0		18	1	12	s.	D., S. S. & A. Ry.
Whitefish Point	Chippewa	610	21	48.2	+ 3.9	78	27†	22	3	34	3.80	+ 0.77	1.05	2.6	11	11	2	18	nw.	Robert Carlson.
Michigan, Lower Peninsula.																				
Adrian	Lenawee	770	33	66.6	+ 8.6	99	27	27	2	41	3.26	− 1.00	1.25	0	6	15	9	7	n.	B. F. Gibbs.
Allegan	Allegan	698	20	65.4	+ 8.7	94	27	29	3	40	4.58	+ 0.68	1.36	0	9	8	14	9	nw.	Pere Marquette R. R.
Alma	Gratiot	750	24	62.6	+ 6.5	91	27	25	3	42	3.88	+ 0.53	0.70	T.	9	11	17	3	sw.	P. M. Smith.
Alpena	Alpena	609	38	55.2	+ 5.7	94	27	22	3	37	3.72	+ 0.39	1.23	T.	12	10	7	14	se.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for May, 1911. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Michigan Lower Peninsula—Continued.																				
Ann Arbor	Washtenaw	930	31	65.2	+ 7.6	95	27	29	2	38	1.05	− 2.66	0.46	0	7	18	10	3	sw.	University of Michigan.
Arbela	Tuscola	728	15	63.2	+ 6.3	92	27	25	3	39	3.19	− 0.82	0.84	0	8	7	16	8	sw.	William Atkin.
Battle Creek	Calhoun	822	27	66.6	+ 7.1	95	27	30	2†	38	1.32	− 1.77	0.55	0	7	18	7	6	sw.	Elmer E. Sager.
Bay City	Bay	593	15	62.6	+ 5.3	96	27	27	3	36	5.00	+ 1.67	2.00	T.	9	22	6	3	sw.	Pere Marquette R. R.
Benzonia	Benzie	832	15	58.8	+ 6.6	87	27	26	2	35	10.39	+ 7.34	2.04	T.	12	13	10	8	sw.	Martin S. Joiner.
Berlin	St. Clair	.....	22	62.1	+ 6.8	92	26†	24	3	45	2.51	− 1.41	0.71	T.	11	8	18	5	sw.	R. O. Gould.
Big Rapids	Mecosta	906	15	61.2	+ 5.8	92	26	24	3†	42	3.61	+ 0.73	0.71	T.	13	16	8	7	sw.	Charlie Gay.
Bloomingdale	Van Buren	.....	7	64.7	.....	94	27	30	5	38	3.58	.....	1.08	T.	6	24	2	5	sw.	John M. Haven.
Cadillac	Wexford	1,293	2	60.8	.....	92	26	22	1†	38	4.12	.....	0.80	0	12	17	11	3	s.	Water & Light Co.
Cassopolis	Cass	903	10	65.5	+ 6.5	95	27	30	3	34	2.50	− 1.45	0.90	T.	3	24	0	7	nw.	Michigan Central R. R.
Charlevoix	Charlevoix	610	33	56.6	+ 4.6	92	27	22	3	37	4.90	+ 2.28	0.70	T.	9	15	9	7	w.	Pere Marquette R. R.
Charlotte	Eaton	.....	7	63.6	.....	91	27	27	4	38	0.64	.....	0.26	T.	4	24	5	2	sw.	City of Charlotte.
Cheboygan	Cheboygan	611	21	55.6[e]	+ 5.0	92[f]	27	21	3	45[f]	6.17	+ 3.15	2.22	2.0	9	8	16	7	e.	E. A. Bouchard.
Clinton	Lenawee	830	21	64.7	+ 6.6	99	27	27	4	49	3.14	+ 0.99	1.11	0	7	17	13	1	sw.	David Woodward.
Coldwater	Branch	984	14	66.8	+ 7.9	96	27†	30	2†	38	1.88	− 2.23	0.86	0	7	25	5	1	s.	Lake Shore & Mich. So. Ry.
Concord	Jackson	.....	6	65.0	.....	97	27	26	3	39	1.94	.....	0.68	0	4	16	14	1	nw.	Dr. W. N. Armstrong.
Croton	Newaygo	685	3	63.1	.....	88	19†	27	3	41	5.69	.....	1.76	T.	8	9	17	5	sw.	G. R. M. Power Co.
Detroit	Wayne	730	40	64.7	+ 6.8	92	28	30	3	34	1.78	− 1.49	0.47	0	12	16	12	3	s.	U. S. Weather Bureau.
Durand	Shiawassee	799	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. J. Tobin.
East Tawas	Iosco	590	14	55.8	+ 3.6	83	28	22	3	29	4.71	+ 2.31	1.00	0	9	19	8	4	se.	Detroit & Mackinac Ry.
Eloise	Wayne	640	14	65.5	+ 8.2	94	19†	31	2	42	1.51	− 1.25	0.56	0	8	19	9	3	sw.	John Gilmore.
Flint	Genesee	730	22	63.2	+ 7.3	93[a]	27	28	3	42[a]	2.81	− 0.97	0.55	0	10	15	10	6	w.	William L. Fisher.
Frankfort	Benzie	589	7	54.8	.....	80	18	28	1†	31	5.76	.....	1.34	1.5	8	19	0	12	s.	Capt. George Morenci.
Ganges	Allegan	665	2	62.5	.....	88	27	32	1†	35	3.78	.....	1.18	T.	10	21	6	4	sw.	H. H. Hutchins.
Gaylord	Otsego	1,367	6	61.1	.....	90	27	25	1†	37	.....	.....	.....	0.2	....	18	0	13	sw.	Michigan Central R. R.
Gladwin	Gladwin	704	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George R. Smith.
Grand Haven	Ottawa	628	30	60.1	+ 5.3	87	27	31	1	28	3.40	+ 0.06	1.10	T.	10	16	11	4	s.	U. S. Weather Bureau.
Grand Rapids	Kent	707	22	64.6	+ 5.6	92	27	32	1	31	7.18	+ 3.84	3.22	T.	10	10	14	7	sw.	Do.
Grape	Monroe	625	21	66.2	+ 8.3	97	28	28	3	43	1.20	− 2.40	0.40	0	6	16	14	1	w.	Joseph W. Morris.
Grass Lake	Jackson	989	5	63.8	.....	96	27	27	3	37	1.63	.....	0.65	0	5	20	1	10	sw.	Menzo Conklin.
Grayling	Crawford	1,147	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. S. N. Insley.
Harbor Beach	Huron	635	23	57.5	+ 5.7	91	19	26	3	44	7.25	+ 4.32	3.00	0.5	7	17	8	6	s.	Pere Marquette R. R.
Harrison	Clare	1,159	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Harrisville	Alcona	616	27	53.6	+ 3.2	83	11	21	3	37	5.75	+ 2.61	1.22	1.1	11	7	13	11	sw.	Dr. E. W. Mitchell.
Hart	Oceana	698	19	63.4	+ 8.7	92	27	28	2	34	11.61	+ 8.32	2.70	0	8	13	14	4	sw.	Pere Marquette R. R.
Hayes	Huron	620	21	61.1	+ 6.5	94	27	28	3†	36	4.11	+ 1.10	1.00	0	12	10	14	7	sw.	Theo. Leipprandt.
Highland	Oakland	830	19	.....	.....	.....	.....	.....	.....	.....	1.60	− 2.06	0.57	T.	5	.....	.....	.....	.....	A. D. De Garmo.
Hillsdale	Hillsdale	1,150	14	64.8	+ 7.4	94	27	28	3	36	1.59	− 2.81	0.64	T.	5	18	10	3	sw.	Prof. C. L. Herron.
Holland	Ottawa	610	5	60.4	.....	93	27	28	1	36	3.74	.....	1.04	T.	10	16	14	1	sw.	City of Holland.
Howell	Livingston	924	19	64.1	+ 7.6	94	27	25	3	43	2.05	− 1.18	0.40	0	9	19	9	3	sw.	Frank Sharp.
Ivan	Kalkaska	.....	22	60.1	+ 7.1	90	26†	19	3	43	6.11	+ 3.14	1.30	0.5	12	10	17	4	nw.	O. L. Giddings.
Jackson	Jackson	927	14	66.5	+ 7.1	99	27	28	2†	40	2.27	− 1.55	0.50	0	7	16	12	3	nw.	City of Jackson.
Jeddo	St. Clair	667	22	60.9	+ 6.2	92	27	29	2	38	3.16	− 0.18	0.87	0	10	15	11	5	ne.	William Bice.
Kalamazoo	Kalamazoo	955	35	66.8	+ 8.6	93	27†	31	2	34	1.12	− 3.00	0.35	T.	6	8	22	1	sw.	Kalamazoo Asylum.
Lansing (Agr. College)	Ingham	820	47	63.5	+ 5.6	93	27	27	3	36	2.67	− 0.62	1.22	T.	8	14	11	6	sw.	U. S. Weather Bureau.
Lansing (Capitol)	....do	881	24	64.8	+ 7.5	93	27	28	2	35	2.84	− 0.72	0.83	T.	10	14	7	10	sw.	State board of health.
Lapeer	Lapeer	827	12	65.1	+ 9.0	96	27	27	3	40	3.28	+ 0.29	1.45	T.	9	15	13	3	sw.	Michigan Home.
Ludington	Mason	586	13	57.4	+ 4.8	83	19	28	4	41	5.96	+ 3.61	1.73	0	10	17	8	6	sw.	Pere Marquette R. R.
Luther	Lake	1,028	1	61.0	.....	93	26	20	4	47	4.45	.....	0.93	0	12	16	9	6	sw.	John W. Nichoson.
Mackinaw	Cheboygan	592	15	53.8	+ 4.9	90	19†	28	2	45	3.94	+ 0.38	1.05	0	9	15	10	6	sw.	Grand Rapids & Ind. Ry.
Mancelona	Antrim	1,121	15	59.4	+ 6.8	94	26	18	3	42	5.20	+ 2.94	1.50	T.	9	21	4	6	s.	Do.
Manistee	Manistee	600	14	62.2[d]	+ 9.4	93	28	29	14	41[d]	.....	.....	.....	.....	.....	15[d]	8[d]	4[d]	sw.	Pere Marquette R. R.
Midland	Midland	604	12	62.2[d]	+ 3.9	94	27†	26	3	38[d]	.....	.....	.....	T.	....	16[d]	9[d]	3[d]	se.	Do.
Morenci	Lenawee	811	4	67.1	.....	99	27	27	3	45	1.69	.....	0.68	0	8	14	13	14	sw.	George J. Tripp.
Mount Clemens	Macomb	615	11	60.5	+ 4.7	96	28	20	3	51	2.71	+ 0.07	1.00	0	7	12	8	11	se.	City Waterworks.
Mount Pleasant	Isabella	826	12	.....	.....	91	27	.....	.....	.....	1.91	− 0.73	0.87	0	5	17	5	9	w.	Pere Marquette R. R.
Muskegon	Muskegon	587	15	60.3	+ 4.6	87	19†	30	2	27	3.30	− 0.79	1.10	T.	6	13	6	12	w.	Grand Rapids & Ind. Ry.
Old Mission	Grand Traverse	858	17	56.8	+ 3.6	88	27	24	3	35	7.80	+ 4.79	1.40	1.0	10	9	16	6	n.	E. O. Ladd.
Olivet	Eaton	934	21	63.8	+ 7.2	90	27	28	2	32	2.72	− 1.34	1.23	0	9	23	4	4	w.	Prof. G. A. Knapp.
Omer	Arenac	616	12	60.4	+ 7.7	90	21†	30	3	44	3.25	+ 0.79	0.80	0	9	3	11	17	nw.	Detroit & Mackinaw R. R.
Onaway	Presque Isle	826	8	55.7	+ 2.3	92	27	20	2†	44	4.20	+ 1.13	1.00	.....	7	17	0	14	nw.	Do.
Owasso	Shiawassee	731	14	65.2[e]	+ 5.9	95	27	25	3	38[e]	3.48	+ 0.52	1.37	0	7[f]	16[f]	3[f]	6[f]	sw.	Owosso Sugar Co.
Petosky	Emmet	660	21	57.0	+ 6.6	92	19†	26	4	50	2.70	− 0.28	1.00	1.0	9	10	8	13	w.	Grand Rapids & Ind. Ry.
Plymouth	Wayne	725	14	64.1[b]	+ 6.6	98	27	21	4	46[b]	.....	.....	.....	0	....	17[b]	7[b]	3[b]	sw.	Pere Marquette R. R.
Pontiac	Oakland	935	11	64.8	+ 8.1	95	27	30	2†	35	1.75	− 1.96	0.55	0	5	28	0	3	sw.	Fred W. Shaw.
Port Austin	Huron	618	14	.....	.....	.....	.....	.....	.....	.....	3.31	+ 0.67	0.68	0	11	11	10	10	nw.	Pere Marquette R. R.
Port Huron	St. Clair	639	36	60.8	+ 7.1	90	27	28	3	34	2.10	− 1.14	0.80	T.	10	16	7	8	ne.	U. S. Weather Bureau.
Reed City	Osceola	1,033	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	....	10[e]	10[e]	6[e]	sw.	Pere Marquette R. R.
Roscommon	Roscommon	1,141	7	57.0[b]	.....	89	27	14	3	43[b]	5.80	.....	1.18	0.1	12	9[b]	18[b]	2[b]	s.	State Forestry Com.
Saginaw	Saginaw	601	9	65.4	.....	94	27	29	2†	35	2.88	.....	1.33	0.2	11	12	17	2	sw.	Postmaster.
Saginaw, West Side	....do	601	16	64.3	+ 6.2	94	27	26	3	35	4.22	+ 0.72	0.92	T.	12	15	11	5	sw.	Robert B. Hudson.
St. James	Charlevoix	681	5	53.8	.....	87	19	21	3	34	3.64	.....	0.90	2.5	9	16	2	13	sw.	Rev. James Malone.
St. Joseph	Berrien	593	24	64.3	+ 7.0	92	27	32	2	31	3.76	+ 0.14	1.20	0	7	13	12	6	sw.	City of St. Joseph.
Sandusky	Sanilac	790	2	61.0	.....	96	20	24	3	38	.....	.....	.....	T.	....	17	8	6	sw.	Pere Marquette R. R.
Saranac	Ionia	639	16	64.5	+ 7.0	95	27	26	3†	41	3.01	− 0.41	0.80	0	6	15	2	14	sw.	John Wallington.
South Haven	Van Buren	585	15	59.4	+ 4.2	88	27	32	2†	30	2.00	− 0.91	0.60	T.	5	19	11	1	sw.	Mrs. M. E. De Diemar.
Stanton	Montcalm	880	17	60.2[a]	+ 3.9	90	27	21	2	45[b]	0.66	− 2.78	0.12	1.0	7[b]	17[b]	7[b]	5[b]	sw.	City of Stanton.
Thornville	Lapeer	975	34	63.2	+ 4.6	90	27	28	2†	30	2.78	− 0.82	0.78	T.	9	12	9	10	w.	Dr. J. S. Caulkins.
Traverse City	Grand Traverse	588	14	57.2	+ 5.2	92	27	25	3	43	5.16	+ 2.72	1.43	T.	10	7	16	8	se.	Grand Rapids & Ind. Ry.
Vassar	Tuscola	641	10	64.0[a]	+ 7.8	92	27	26	2	2[a]	5.12	+ 2.09	2.30	0	7[a]	15[a]	11[a]	4[a]	sw.	Pere Marquette R. R.
Wasepi	St. Joseph	842	14	65.2	+ 7.2	93	27	30	5	35	3.03	− 0.85	1.35	0	8	27	0	4	sw.	Charles A. Palmer.
West Branch	Ogemaw	973	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Michigan Central R. R.
Woodlawn	Mountmorenci	.....	9	57.2	+ 4.4	89	27	20	2	43	5.85	+ 2.33	1.05	5.0	11	15	6	10	sw.	T. C. Mathews.
Ypsilanti	Washtenaw	736	26	64.4	+ 6.9	93	28	28	3	41	1.95	− 1.99	0.70	0	8	6	24	1	sw.	Orin J. Bemiss.
Ohio.																				
Akron	Summit	1,081	24	66.0	+ 6.6	93	27	32	2	40	2.18	− 1.75	0.52	T.	11	19	4	8	nw.	Prof. C. R. Olin.
Benton Ridge	Hancock	800	18	67.8	+ 6.8	97	28	31	3	39	1.44	− 1.98	1.00	T.	6	18	12	1	sw.	J. W. Powell.
Bowling Green	Wood	670	30	66.0	+ 6.3	97	27	29	3	42	1.86	− 2.20	0.75	0	6	19	10	2	sw.	G. C. Housekeeper.
Bucyrus	Crawford	1,000	17	66.6	+ 5.9	98	28	30	3†	40	1.47	− 3.05	0.40	0	8	18	6	7	s.	James R. Hopley.
Cleveland (1)	Cuyahoga	762	40	64.4	+ 5.9	89	22	34	2	33	1.97	− 1.25	0.79	T.	12	14	13	4	se.	U. S. Weather Bureau.
Cleveland (2)	....do	754	14	65.0	+ 6.7	92	19†	34	3†	31	2.59	− 0.22	0.80	0	9	22	7	2	sw.	Rev. F. L. Odenbach, S. J.
Conneaut	Ashtabula	675	1	63.7	.....	94	28	29	5	34	2.71	.....	0.94	0	9	16	8	7	sw.	E. L. Ransom.
Defiance	Defiance	712	17	65.3	+ 5.0	99	27	29	5	44	0.62	− 3.19	0.28	0	6	17	7	7	s.	John F. Heilshorn.

TABLE 1.—*Climatological data for May, 1911. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Continued.																				
Findlay	Hancock	776	22	67.4	+ 7.0	100	28	29	3†	45	0.53	− 3.23	0.13	0	6	27	1	3	sw.	Dr. E. A. Moser.
Fremont	Sandusky	628	9	67.7	.....	95	26†	31	3	42	1.70	.....	0.56	0	10	23	7	1	sw.	E. Stanley Thomas.
Hedges	Paulding	725	17	67.0	+ 7.0	99	28	28	3	42	1.46	− 1.70	0.60	0	5	22	8	1	w.	Charles Stutzman.
Hillhouse	Lake	997	18	63.4	+ 6.5	92	28	27	5	33	2.10	− 2.45	0.55	T.	9	22	7	2	w.	J. W. Doncaster.
Hiram	Portage	1,260	31	65.6	+ 7.5	93	28	30	3	36	2.73	− 1.17	0.69	T.	7	15	13	3	sw.	Prof. G. H. Colton.
Hudson	Summit	1,153	50	65.4	+ 5.7	97	19	28	3	43	1.79	− 1.39	0.66	0	9	27	2	2	s.	Dr. W. I. Chamberlain.
Lima	Allen	875	12	66.2	+ 5.8	95	26	30	3	35	0.87	− 2.93	0.52	0	3	19	7	5	w.	Miss Ollie DeLong.
Medina	Medina	944	23	64.8	+ 5.1	97	28	28	5	49	2.05	− 1.41	0.62	T.	9	26	2	3	n.	F. W. Clark.
Montpelier	Williams	880	19	66.2	+ 7.4	100	27	28	3	43	2.43	− 1.87	0.80	0	9	23	5	3	w.	G. L. Laser.
Napoleon	Henry	680	24	66.9	+ 6.9	95	27†	31	3	39	2.10	− 1.37	0.60	0	9	23	6	2	w.	A. C. Senter.
New Bremen	Auglaize	1,038	18	66.2	+ 4.7	96	27†	31	3	37	1.78	− 1.13	1.10	0	5	13	16	2	w.	Miss Lillian Grothaus.
North Royalton	Cuyahoga	1,000	18	64.2	+ 5.7	93	28	28	3	37	2.81	− 1.12	0.79	0	6	22	7	2	w.	W. S. Edgerton.
Norwalk	Huron	719	25	66.5	+ 6.4	98	28	30	3†	33	0.70	− 2.60	0.17	0	7	21	5	5	w.	Dr. Albert Sheldon.
Oberlin	Lorain	855	36	65.2	+ 6.4	95	28	29	3†	43	1.45	− 2.11	0.54	0	5	21	8	2	sw.	Prof. F. F. Jewett.
Ottawa	Putnam	720	16	66.1	+ 5.1	98	27	30	3†	40	1.61	− 1.99	0.84	0	8	3	25	3	w.	Prof. J. T. Maidlow.
Sandusky	Erie	629	34	65.8	+ 6.6	91	19	33	3	34	1.72	− 1.53	0.54	T.	11	16	12	3	sw.	U. S. Weather Bureau.
Tiffin	Seneca	775	29	67.0	+ 6.8	94	28	32	2	36	2.78	− 0.96	1.52	T.	8	21	9	1	sw.	Prof. T. H. Sonnedecker.
Toledo (1)	Lucas	769	40	67.4	+ 7.7	95	28	33	2	35	1.63	− 1.64	0.68	0	10	20	10	1	sw.	U. S. Weather Bureau.
Toledo (2)	....do	606	7	68.0	.....	96	28	32	2	29	1.41	.....	0.56	0	8	25	5	1	sw.	J. A. Krance, S. J.
Upper Sandusky	Wyandot	854	28	66.4	+ 5.8	94	26†	30	2	38	2.10	− 1.86	0.60	T.	8	12	15	4	w.	Robert E. Tracht.
Vickery	Sandusky	588	18	66.0	+ 6.4	94	27	30	3†	43	1.79	− 1.72	1.01	0	7	13	15	3	sw.	John W. Barr.
Wauseon	Fulton	780	39	66.4	+ 7.5	97	27	28	3	43	0.83	− 3.30	0.25	T.	12	18	10	3	sw.	Thomas Mikesell.
Willoughby	Lake	649	17	.....	.....	.....	.....	.....	.....	.....	2.32	− 0.29	1.09	0	9	23	4	4	sw.	C. M. Richardson.
Pennsylvania.																				
Erie	Erie	658	38	63.0	+ 5.7	90	28	32	2	32	2.49	− 0.94	0.79	0.2	13	13	13	5	w.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	540	20	63.8	+ 9.8	90	23†	28	3	37	0.92	− 2.53	0.48	T.	6	17	12	2	sw.	A. E. Cooley.
Angelica	Allegany	1,340	28	59.7	+ 4.9	90	22	19	4†	47	2.31	− 1.47	0.62	T.	11	12	9	10	w.	Charles P. Arnold.
Appleton	Niagara	270	20	60.4	+ 5.5	95	28	29	4	42	1.46	− 1.70	0.50	T.	7	18	11	2	sw.	H. A. Van Wagoner.
Auburn	Cayuga	715	42	64.5	+ 7.8	95	22	25	3	37	1.89	− 1.58	0.55	T.	8	24	6	1	n.	A. H. Underwood.
Avon	Livingston	585	16	63.6	+ 6.2	95	20†	28	3	42	2.89	+ 0.25	1.23	0	7	21	7	3	.....	W. G. Markham.
Blue Mountain Lake	Hamilton	1,750	11	.....	.....	.....	.....	.....	.....	.....	2.50	− 2.06	0.52	1.0	7	26	4	1	w.	B. F. Merwin.
Brockport	Monroe	537	15	64.0	+ 7.8	94	20	27	3	34	1.61	− 1.38	0.47	1.0	14	14	15	2	w.	W. H. Lennon.
Buffalo	Erie	767	60	60.4	+ 5.9	94	22	29	3	29	1.30	− 1.80	0.52	T.	9	12	13	6	sw.	U. S. Weather Bureau.
Canton	St. Lawrence	448	17	61.8	+ 5.6	93	22	28	3	38	2.99	+ 0.14	1.00	0.2	12	16	8	7	s.	Do.
Cape Vincent	Jefferson	246	6	59.0	.....	89	23	30	3	32	3.71	.....	1.25	0	8	14	10	7	s.	Verne M. Rice.
Carvers Falls	Washington	243	13	61.9	+ 6.8	94	22	26	4	47	2.28	− 0.45	0.85	0	4	26	4	1	s.	Washburn Fancher, C. E.
Chazy	Clinton	151	11	63.8	+ 9.0	94	28	27	4	43	0.40	− 2.58	0.35	0	2	25	4	2	n.	W. R. North.
Dannemora	....do	1,490	6	62.8	.....	94	21	26	3†	37	2.13	.....	0.62	T.	5	16	7	8	s.	Dr. W. N. Thayer.
Elba	Genesee	500	12	62.0	+ 6.9	92	20†	24	3	38	2.06	− 0.99	0.60	0.1	8	20	5	6	sw.	Joseph S. Wilford.
Fayetteville	Onondaga	530	10	66.0	+ 7.7	96	21	28	4†	42	2.35	− 0.65	0.77	0.5	11	20	5	6	nw.	Dana H. Wells.
Faust	Franklin	1,550	0	59.8	.....	92	22	23	4†	45	4.04	.....	1.03	3.0	10	.....	.....	.....	.....	Santa Clara Lumber Co.
Gabriels	....do	1,729	9	59.4	.....	94	21	19	4	49	2.95	.....	1.00	3.0	10	16	11	4	w.	Gabriels Sanatorium.
Harkness	Clinton	622	9	62.7	+ 7.1	94	28	25	4	42	0.95	− 1.46	0.53	0	6	26	4	1	s.	J. W. Harkness.
Hemlock Lake	Livingston	900	13	62.8	+ 6.3	90	22	28	3	33	2.35	− 0.33	0.83	0	5	20	6	5	nw.	D. H. Westbury.
Hunt	....do	1,321	12	63.6	+ 7.0	98	22	26	3	44	3.15	− 0.51	1.58	0	6	8	20	3	sw.	W. S. Barager.
Ithaca	Tompkins	928	33	64.5	+ 7.5	96	22	28	4	39	2.24	− 1.19	1.10	0.1	7	16	9	6	nw.	U. S. Weather Bureau.
Keene Valley	Essex	1,000	13	62.4	+ 8.9	99	21	21	4	51	1.17	− 2.01	0.23	2.0	11	20	8	3	s.	E. R. Wells.
King Ferry	Cayuga	.....	11	.....	.....	.....	.....	.....	.....	.....	1.36	− 1.57	0.60	0	8	24	5	2	nw.	Lucius A. Goodyear.
Lake George	Warren	350	14	64.0	+ 8.2	96	22	26	4	44	1.22	− 1.80	0.48	0	7	19	11	1	s.	Charles Forsell.
Lake Placid Club	Essex	1,864	3	53.5	.....	86	28	17	4	44	3.19	.....	0.71	9.0	12	16	11	4	w.	Henry Van Hoevenberg.
Le Roy	Genesee	920	21	63.8	+ 6.2	93	22	27	3	37	2.27	− 1.02	0.52	T.	10	15	7	9	nw.	F. W. Ball.
Lockport	Niagara	650	24	62.0	+ 5.1	91	20†	27	3	45	2.08	− 0.76	1.00	0.2	8	21	2	8	sw.	J. E. Wakeman.
Lowville	Lewis	900	44	61.3	+ 6.9	92	21†	25	4	48	4.33	+ 1.44	2.00	0	5	18	8	5	w.	Charles J. Rice.
Moira	Franklin	200	11	63.8	+ 8.8	94	21	29	3†	44	2.04	− 1.09	1.09	0.5	5	21	7	3	w.	C. E. McBride.
Nehasane	Herkimer	1,750	3	57.3	.....	91	22	16	4	50	5.25	.....	1.50	2.5	11	21	7	3	w.	L. W. Brown.
North Lake	....do	1,822	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. A. Paull.
Ogdensburg	St. Lawrence	175	27	62.2	+ 5.7	93	22	29	4	36	2.10	− 0.77	0.78	T.	7	12	16	3	s.	State Hospital.
Old Forge	Herkimer	1,733	3	58.6	.....	92	22	20	4	45	3.17	.....	0.81	.....	9	11	14	6	w.	Mrs. S. W. Nelson.
Oswego	Oswego	335	41	59.4	+ 4.7	91	28	30	4	31	1.80	− 1.05	0.67	T.	8	15	11	5	sw.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	7	64.0	.....	90	22	25	3†	38	1.34	.....	0.29	0	8	22	4	5	.....	William Winke.
Palermo	Oswego	460	52	.....	.....	.....	.....	.....	.....	.....	1.31	− 1.38	0.80	0.3	6	24	5	2	sw.	E. B. Bartlett.
Perry City	Schuyler	1,038	31	62.5	+ 6.8	94	22†	23	4†	45	2.16	− 1.08	1.07	0.2	7	17	9	5	nw.	W. H. Jeffers.
Philadelphia	Jefferson	485	5	63.0	.....	92	23	27	3	37	3.61	.....	0.95	T.	12	13	14	4	w.	E. D. Babcock.
Potsdam	St. Lawrence	300	35	62.6	+ 7.5	96	23	17	3†	46	1.34	− 1.82	0.35	0	9	.....	.....	.....	.....	A. E. Sutherland.
Raquette Lake	Hamilton	.....	3	57.6	.....	88	22	22	3	48	3.55	.....	1.22	1.2	12	19	3	9	sw.	R. J. Dunning.
Rochester	Monroe	523	82	63.7	+ 7.0	93	28	27	3	29	2.10	− 0.84	0.62	2.0	10	16	12	3	w.	U. S. Weather Bureau.
Romulus	Seneca	719	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John H. Coryell.
Shortsville	Ontario	740	12	63.5	+ 7.4	90	22†	28	3†	35	1.99	− 0.68	0.86	0	7	19	10	2	nw.	C. H. Latting.
Skaneateles	Onondaga	.....	16	.....	.....	.....	.....	.....	.....	.....	2.18	− 1.31	0.40	0	11	.....	.....	.....	.....	Edward Conron.
Syracuse	....do	597	9	64.6	+ 7.3	92	23	27	3	27	2.21	− 1.18	0.94	T.	9	17	7	7	s.	U. S. Weather Bureau.
Ticonderoga	Essex	344	13	63.6	+ 6.9	92	29	28	3	38	.....	.....	.....	.....	.....	20	7	4	s.	Miss Eva M. De Lano.
Tupper Lake	Franklin	1,522	11	58.5	+ 5.6	92	22	19	4	45	4.03	+ 0.97	1.02	4.0	10	.....	.....	.....	.....	Rev. A. W. Maddox.
Volusia	Chautauqua	1,167	12	62.0	+ 6.7	91	22	26	3	33	2.35	− 1.01	1.00	T.	7	16	11	4	sw.	Benjamin Breads.
Wanakena	St. Lawrence	.....	1	59.4	.....	94	22	21	4	47	4.04	.....	0.90	5.0	9	15	12	4	nw.	J. Otto Hamele.
Watertown	Jefferson	737	19	63.0	+ 5.6	92	22	28	3	32	2.95	− 0.69	1.94	T.	10	20	9	2	sw.	H. P. Dunlap.
Wedgewood	Schuyler	1,430	22	63.7	+ 7.8	93	22	24	3	31	1.88	− 1.89	0.66	0.5	12	18	12	1	nw.	Orlando F. Corwin.
Westfield	Chautauqua	837	15	63.1	+ 6.3	90	19†	30	3†	39	2.21	− 1.56	1.10	0	8	.....	.....	.....	.....	John R. Rogers.
Youngstown	Niagara	.....	9	.....	.....	.....	.....	.....	.....	.....	1.33	.....	0.47	0	6	10	19	2	w.	B. V. Brookins.
Vermont.																				
Burlington	Chittenden	404	3	62.5	+ 8.6	92	21	29	4	39	1.13	− 1.70	0.66	0.3	6	12	10	9	s.	U. S. Weather Bureau.
Cornwall	Addison	507	17	64.6	+ 7.6	94	22	28	3	39	1.57	− 1.57	0.40	3.0	6	19	7	5	s.	C. H. Lane.
Enosburg Falls	Franklin	601	19	61.4	+ 5.8	93	21†	27	4	42	1.99	− 1.78	0.60	T.	8	18[a]	7[a]	5[a]	n.	L. Howe Pomeroy.
Northfield	Washington	876	24	58.5	+ 5.0	93	22	27	5	45	0.99	− 1.81	0.33	0.2	8	13	8	10	s.	U. S. Weather Bureau.
Wells	Rutland	750	19	62.3	+ 6.9	90	22	25	4	32	1.68	− 1.68	0.96	0	5	19	10	2	s.	E. R. Pember.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 4, Lake region.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Minnesota.																																	
Cloquet	Lake																																
Duluth	do							.01			.29	.02	.02		.41	.85	.48	.01	.37	.34	T.	.03	.31	T.			.02				.29		3.45
Floodwood	do																																
Stephens Mine	do							.20			.50	.10						.96		.40			.25								.95		3.36
Two Harbors	do							.02			.10	.70			.20	.60	1.48			.60			.18								.32	.50	4.70
Virginia	do							.14			.56						.55		T.	.20			.15								.95		2.55
Wisconsin.																																	
Appleton	Fox	.63							.20		.93				.02	.68	.76				.20	.02	.66	.39								.55	5.04
Ashland	Lake										.45				.33	.77	1.95			.47			.28	.25			.06			.23		4.79
Bayfield	do							T.	T.		.20	.22	.05		.35	.19	2.39	.03		.23		T.	.35	.18			.07	.07		.29	T.	4.62
Cecil	Fox	.72								.28		.52				.30	1.21	.31				.18	.24	.23							T.		3.99
Florence	Menominee	.10						.07		.55	.37					.48	.49	.47	.61		.41		.17	.81							.12	.09	4.74
Fond du Lac	Fox	.74									2.40				.02	.30	.25	T.			.38	.02	.53	.31					T.	.08	T.	.33	5.36
Grand River Locks	do	.25							T.	.07	.72				.32	.27	.33				.34	.54	.65	1.15						T.		.50	5.14
Green Bay	Lake	.52							.17	.38	.92				T.	.53	.81		.73	.69	.01	.28	.12	.54								.02	5.72
Iron River	do							T.			.41	.32	T.		.30	.40	1.92			.27		T.	.10	.17			.06			.24		4.19
Kewaunee	do	.95							.15		.50					.47	1.00		.80		.04	.15	.48	.05					T.	T.	.06	4.65
Manitowoc	do	.78							.25	.60	.30				.12	.32	.43		T.		.02	.02	.06	.20								.22	3.32
Menasha	Fox	.21							.09		.61				.03	.62	.87			.22		.36	.16	.38						T.	.40	3.95
Menomonee Falls	Lake	.57							.09	T.	.78				T.		T.				.06	.10	.14	.12					T.	T.		.14	2.00
Milwaukee	do	.32							.05	.41	.43				T.	T.					.20	.11	.04	.02				T.	T.	T.		.24	1.82
New London	Fox	1.70							.25		.98				.10	1.05	.80		.10	T.		.25	.07	.70							T.	6.00
Oconto	Lake	.60						.70		.18	.15				.36	.47	.42	.30		.52	.24	.09	.13	1.29								5.74
Oshkosh	Fox	.80							.10		.62				.06	.51	.39				.30	.10	.35	1.00					T.	T.		.41	4.64
Pine River	do	.61							.30	T.	1.30				.19	.57	.72	T.			.31	.71	.06	.59	.02				T.		T.	.27	5.65
Plum Island	Lake	.95							.25		.25					.55	.85	.50	.90			.05	.47	.09								.75	5.61
Plymouth	do	.72							.08		.72				T.	.14	.08	.43	T.		.01	.02	.29	.15					T.	.09		.16	2.89
Port Washington	do	.40									.62						.15				.03		.03									.10	1.33
Racine	do	.66	T.						T.		.08				T.						.05	.35	.50							.20	.12	.42	2.38
Ripon	Fox	.85						T.	T.	T.	2.05				.13	.14	.60				.26	.05	*	1.26					T.	T.	.03	.35	5.72
Sheboygan	Lake	.68							.13		.71				T.	.07	.09	.18			.06	T.	.08	.08	T.					.06	T.	.15	2.29
Sturgeon Bay	do	1.06							.27		.45					.92	1.48		.14		.05	.54	.57	.11	.09							.01	5.69
Superior ‖	do								.03		.20	.15	.03		.26	.30	2.09	.04		.65		T.	.50	.04			.06				.32	4.67
Waupaca	Fox	.66							.08	.88	.04				.14	.67	.75	.02	.03	.34		1.05	.07	.83				21	.01				5.78
Illinois.																																	
Chicago	Lake	.28	.01						.16							T.			T.	.06	.77	.84	.37	.02			.02	.77	.03		.04	3.37
Indiana.																																	
Auburn ‖	Maumee	.12	.08							.01		T.									.05	.60	T.	.04	T.					.38	.14		1.41
Berne	do	.19		.03															T.		T.	.07	.10	.01				.12	.16	.29	.39	1.37
Elkhart	St. Joseph	.27								.12											.12	.16	.78						.18		.43	2.06
Fort Wayne	Maumee	.04	T.	.07						.10									.02		.10	.17	.15	.04					.40	.88	.49	2.46
Hammond	Lake Mich	.65							T.	.14										T.	1.63			.08						.04		2.54
Howe ‖	St. Joseph	.06									.30										.18	1.32							.23			2.09
South Bend ‖	do	.25	.04							.05										.02	.02	.45	.02	.76	.02				.04	.03		1.70
Whiting	Lake Mich	.70	T.						.16											T.	1.26	.56	.20	.05			.08	.39		.07		3.47
Michigan, Upper Peninsula.																																	
Baraga	Lake									1.00	.50				1.00						.50	1.00				1.00			.50		5.50
Bergland	Ontonagon											.06			T.	.79	.99	T.	.11	.85		.76	T.	.11	.24		.20			.13		4.24
Blaney	Manistique																																
Calumet	Lake	T.	T.						T.		.28		.02		.30		.84	.04	.97	.81		T.	.24	.13	.03		.12			.14	.14	4.06
Chatham	do	.20							.23		.35					.07	.55	.14	.04		.07	T.	.43	.25	.08				.08		.12	.01	2.62
Deer Park	do	T.		T.					T.		T.						.80					.30	T.								.10	1.20
Detour	St. Marys		.15						T.		.07						.12	T.		.14	.12	.26		.45						.40		1.71
Eagle Harbor	Lake		T.								.30		T.	.24	.15		.40	.25	.20	.69		.08	.35	.05	.15	T.	.01	.07			.12	.07	3.13
Escanaba	do	.21	T.						.11		.30				T.	.33	.55	1.19	.29	.34		T.	.29	.10					T.		.71		4.42
Ewen	Ontonagon		.05								.75					.52	.81	.75	.10	.50			.10	.50		T.		.05			.01		4.14
Grand Marais	Lake	.15							.02		.10					T.	.09	.15			.05		.30	.40							.30		1.56
Green	do																																
Houghton	do	T.						T.			.21	.02	.01		.15	.15	1.22	T.	.66	.72		T.	.38	.02	T.				.20		.22	T.	3.96
Humbolt	Escanaba	.10									T.												(?)							T.		
Iron Mountain	Menominee	T.									1.22					.32	.50	.55	.96				.43	.34	.06					T.	.03	4.41
Iron River	do	T.							T.		.80				.20	.60	.30	1.20	1.10	.60	1.20	1.00	.80								.90	8.70
Ironwood	Lake										.47	T.	T.		T.	.30	.26	.10		.40		.17	.13	.05				.56		.02		2.46
Ishpeming	Escanaba	.01	T.						.05		.10		T.	.20	.50	.20	.30		.40	T.	.20	.05	.05						.30		.10		2.46
Isle Royale	Lake									.05		.19			.40		.10			.20			.63	.16							.72		
Mackinac Island	do	.09	T.						.11		1.02				.27	1.07	.18				.62	1.10	1.47	.75							.30	6.98
Maple Ridge	do								.10		.25				.20	.72		.83					.31	.44							.05	.10	3.00
Marquette	do	T.	.01						.18		.02		T.			.13	.76	.03	.05	.58		T.	.36	.35				.53			.06	T.	3.06
Menominee	Menominee								.19		.12					.41	.98		.92	.15		.14	.45	.39							.29		4.04
Munising	Lake	.13							.24		.29	.10					.70	.15			.18		.37	.25	.01				.05			.14	2.61
Newberry	Tequamen'n	.37							.34		.25	.38					.46	.29			.12	.03	.78	.04	.03						.01	.09	3.19
Powers	Lake																																
St. Ignace	do	.26	T.					.12								.30	.50	2.00	.15		.30	.48	1.00	.40	.20							.32	6.03
Sault Ste. Marie	St. Marys	.39						T.	.22		.99				T.	.03	.32	.38		.52	.18	.21	.56	.31	.01						.04	.03	4.19
Thomaston	Lake										.04					1.05	.53	.40		.55		T.	.38					.18			.10		3.23
Victoria	Ontonagon										.40		.03		.05	1.59	.89	T.	.12	.47	.22	.01	.10	.16	.03			.17	.03		.10	T.	4.37
Watersmeet	do	.04							.05		1.27				.06	.54	.40	1.03	.21	.37	.55	.05	.35	.35	.04			.46	.06		.09	.27	6.19
Wetmore	Lake	.10																.04		.03			.05	.04									
Whitefish Point	do	.24										.10				.01	1.05	.54			.26	.50	.52	.37	.03							.18	3.80
Michigan, Lower Peninsula.																																	
Adrian	Raisin									.5	.05										.20		.69						1.25		1.02	3.26
Allegan	Kalamazoo	.21	.08								.21					.18					1.17	.41	1.36	.14						.82		4.58
Alma	Saginaw	.42	.04						T.		.18						T.	.23		.18	.70	.70	.45	.32					T.			.66	3.88
Alpena	Lake	.67	.01						.01							.13	1.19	.27		.22	.24	.10	.04	.10	T.						T.	.74	3.72
Ann Arbor	Huron	.20	.02							.01	.06										T.	.28	T.	.02								.46	1.05
Arbela	Saginaw	.84									.07						19				.73	.51	.01	.08								.76	3.19
Battle Creek	Kalamazoo	.18									.05										.05	.55	.05	.12								.32	1.32
Bay City	Saginaw	.25									.10							.60		.10	.40	2.00	.50	.55								.50	5.00
Benzonia	Betsie	.98								.12	.18					1.84	1.84	.45	.81	.19		2.04	1.44	.31							.19		10.39
Berlin	Clinton	.68	.03								.05					.04	.01			T.		.71	.03	.17							.36	.02	.41	2.51

TABLE 2.—*Daily precipitation for May, 1911. District No. 4*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Michigan, Lower Peninsula—Contd.																																	
Big Rapids	Muskegon	.50									.23					.11	.07	.25	.41	.12	.12	.71	.42	.06					.04			.57	3.61
Bloomingdale	Lake	.32	.43	T.												T.					.85	.48	1.08	T.								3.58
Cadillac	Manistee	.80							.20		.05					.40	.50	.02	.20		.30	.20	.70	.05								.70	4.12
Cassopolis	St. Joseph	.90	T.																				.85								.75	2.50
Charlevoix	Lake	.62														.54	.70	.60	.20		.48		.56	.60								.60	4.90
Charlotte	Kalamazoo	.26									.18									T.		.01	.19	T.									0.64
Cheboygan	Cheboygan	.20	.80						T.			T.				2.22	.50				.15	.60	.60	.60	T.							.50	6.17
Clinton	Raisin	.15									1.11					.06						.30	.05						1.05		.42	3.14
Coldwater	St. Joseph	.23									.10										.23	.86	.02	T.					.08		.36	1.88
Concord	Kalamazoo	.35	T.								T.								T.		.68	.27	T.	T.							.64	1.94
Croton	Muskegon	.55	.04								1.50					.08			T.		T.	.69	1.76	T.					.34		.73	5.69
Detroit	Detroit	.39		T.					T.		.04					.01	.02	.07	T.		.31	.01	.11	.10					.16	.09		.47	1.78
Durand	Saginaw																															
East Tawas	Lake	.35														.60	1.00	.65	.04	T.	1.00	.12	T.	T.					.25			.70	4.71
Eloise	Rouge	.15		T.							.11						T.		.03	.04	T.	.56	T.	.06						.07		.49	1.51
Flint	Saginaw	.40	.30								.18							.50			.06	.40	.02	.05						.35		.55	2.81
Frankfort	Betsie	.85							.13							1.32	.70		.43		.29	.70	1.34										5.76
Ganges	Lake	.64	.01						T.		.19					.01					1.05	.04	1.18	.03					.11			.52	3.78
Gaylord	Cheboygan																															
Gladwin	Saginaw																															
Grand Haven	Grand	.29							T.	.16	1.00					.01	.01				.38	T.	.94	T.				.01	.06	T.		.54	3.40
Grand Rapids	do	.83									.67					.09	T.			.28	3.00	.24	.93	.27					.04	T.		.83	7.18
Grape	Raisin	.15									.21						T.		T.		.05		.04						.40			.35	1.20
Grass Lake	Grand	.42															T.				.15	.06	.65									.35	1.63
Grayling	Au Sable																															
Harbor Beach	Lake	.65	.05														.60				1.70	3.00		.30								.95	7.25
Harrison	Saginaw																															
Harrisville	Lake	.63	.10						.03							.36	.90	.40			.10	.46	1.10	.45								1.22	5.75
Hart	Pentwater	2.60									2.50						1.50		1.60		.05	.10	2.70									.56	11.61
Hayes	Pigeon	.50									.10					.10	.40	.20	.10	.30	.30	.55	.35	.21								1.00	4.11
Highland	Huron	.43	T.								.18										.23	.19										.57	1.60
Hillsdale	St. Joseph	.24	T.	T.																	.59	.06	T.	.06								.64	1.59
Holland	Lake	.56								T.	.21					.06					.13	1.04	.88	.01					.36	T.	.01	.48	3.74
Howell	Saginaw	.30	.20								.05							.05			.05	.40	.55	.10								.35	2.05
Ivan	Manistique	.65	.05						.04		.14					.35	1.00	.78	.25		.15	1.30	.40	T.						T.		1.00	6.11
Jackson	Grand	.50									.08									T.		.45	.40	.40	.02							.42	2.27
Jeddo	St. Clair	.87	.02								.06				T.		.30	.04				.27	.05	.55								.55	3.16
Kalamazoo	Kalamazoo										.35								.12	.06			.22	.09								.28	1.12
Lansing (Agr. College)	Grand	.43									.26										1.22		.11	.15					.01	.01		.48	2.67
Lansing (Capitol)	do	.61	.01								.26										.83	.42	.11	.06						.03	.01	.50	2.84
Lapeer	Saginaw	.21	.11		.20						.06							.16				1.45		.19						.30		.60	3.28
Ludington	Pere Marquette	1.04							T.		.52				.38	.45	.21	.28	.07			.10	1.73									1.18	5.96
Luther	Manistee	.62			T.				.20		.31					.28	.24	.30	.54		.07	.36	.93	.09	T.					T.		.51	4.45
Mackinaw	Lake	.04														.15	.76	.22				.46	.33	1.05	.52							.41	3.94
Mancelona	do	.02	T.						T.		T.					.02	1.02	1.06	1.01		T.	.35	.20	.02	T.						T.	1.50	5.20
Manistee	do								T.		1.10	T.				.25	.35	.75	.48			1.84	1.38						T.		.15	
Midland	Saginaw																															
Morenci	Maumee	.12									.05							.06			.24	.06		.11					.68			.37	1.69
Mount Clemens	Clinton	1.00	T.								.10							.20				.40	.06	.20						T.		.75	2.71
Mount Pleasant	Saginaw															.10	.45			.37		.12	.87									1.91
Muskegon	Muskegon	.60	T.								.60						.10				T.	.20	1.10	T.				T.				.70	3.30
Old Mission	Lake	1.39									.60					.76	.70	1.38	.50		.50	.27	1.40	.10								.80	7.80
Olivet	Kalamazoo	.42	.02								.08									.01	.17	1.23	.03	.28						T.		.48	2.72
Omer	Lake	.80															.30	.70	.40	.20	.30	.10	.20	.25									3.25
Onaway	Cheboygan	.80														.30	1.00	.80					.60	.30								.40	4.20
Owosso	Saginaw	.60	.10								.18										.13		1.37	.30								.80	3.48
Petoskey	Lake	.10	T.									T.				1.00	.10	T.	.10	.20	.10	.50	.50									.10	2.70
Plymouth	Rouge									T.	T.											2.00							T.		.40	
Pontiac	Clinton	.55	T.															T.				.37		.05								.25	1.75
Port Austin	Lake	.11	.03													.23	.45	.38	.07		.62	.65	.05	.04								.68	3.31
Port Huron	St. Clair	.80	T.						.01		.04	T.				T.	.01	.06		.06	.13	T.		.29					.02			.68	2.10
Reed City	Muskegon	.03															.03				.08										.08	
Roscommon	Au Sable	.55	.01						.03		.65					.42	.80	.45	.37			.16		1.05				.13				1.18	5.80
Saginaw	Saginaw	.55	.20							T.	.02					.08	.01		.03	T.	.56	1.33	.05	.04								.01	2.88
Saginaw, West Side	do	.53	.02						T.		.21					.09	.12	.16	.01		.92	.77	.37	.32								.70	4.22
St. James	do	.23	T.								.22					.35	.65	.28	.60			.36	.90	.05									3.64
St. Joseph	St. Joseph	.50															T.				.21	.70	1.20						.20	.20	.75	3.76
Sandusky	Lake	.27									.08					.02	.08															
Saranac	Grand	.80									.54										.25	.75	.15								.52	3.01
South Haven	Lake	.40									.20										.60		.40								.40	2.00
Stanton	Grand	.10								.10										.06		.08	.12						.08		.12	0.66
Thornville	Saginaw		T.								.30					.04	.05	.45				.78	.09	.07								.55	2.78
Traverse City	Lake	1.02	T.								.02					1.04	.07	.04	.05			.05	1.43	.24								1.20	5.16
Vassar	do	.85									.30						.15				.74	2.30									.10	.68	5.12
Wasepi	St. Joseph	.25								.02	.12								T.		1.35	.39	.08								.07	.75	3.03
West Branch	Lake																															
Woodlawn	Au Sable	.92	.20						T.							.55	.80	.72	.04	T.		1.05	.56	.40					.15			.46	5.85
Ypsilanti	Lake	.12									.11						T.				.10	.25	.25	.07						.35		.70	1.95
Ohio.																																
Akron ‖	Lake	.42	.33	.02	.02					.03	T.		.45								T.	.01	.05		.52	.26			.04		T.	2.18
Benton Ridge	Maumee	.10	T.									T.							T.	T.		.10	.02						.05	.17	1.00	1.44
Bowling Green	Lake	.70								.10	.08	T.							T.			T.	.15	T.				T.	.08	T.	.75	1.86
Bucyrus ‖	Sandusky	.30	.38							T.			.40									.01		.05					.05	.25	.03	1.47
Cleveland (1)	Lake	.27	.01						T.	.02	.02	.16	.05					T.	.01	.03	.20		.23	.18								.79	1.97
Cleveland (2)	do	.38	.04							.02	.02	.40	.07						T.	T.	.39		T.	.47						T.		.80	2.59
Conneaut	do	.94	.04							.06			.58				.03	.20	.10					.13						T.		.63	2.71
Defiance ‖	Maumee	.20	T.		T.					.02										T.		T.	T.	.08	.02					.28	.02		0.62
Findlay ‖	do	.13	.12	T.						.02										T.	T.	T.	.10	T.	T.					T.	.06	.10	0.53
Fremont	Sandusky	.56								.03	.03	T.								.04	.03		.03	.15					.35		.02	.40	1.70
Hedges	Maumee																			.06			.20							.36	.24	.60	1.46
Hillhouse	Lake	.27	.04							T.	.02	.18	.57					.23		T.	T.	T.		.22	.02							.55	2.10
Hiram	do	.09	T.	T.						T.	.24	T.	.37								T.		.05	.12	.09							.60	2.73
Hudson	do	.66	.09	.02						.06										.12		.06	.21	.15								.42	1.79
Lima	Maumee	.05			T.																	T.	T.	T.							.52	.30	0.87
Medina	Lake	.32	.03							T.	T.	.14	.18							.04		.12		.52	.08						T.	.62	2.05
Montpelier	Maumee	.30		.06							.13										.20	.04	T.	.15							.80	.06	.69	2.43
Napoleon	do	.19								.04	.14								T.		.07		.54	.10							.38	.04	.60	2.10

TABLE 2.—*Daily precipitation for May, 1911. District No. 4*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Ohio—Continued.																																	
New Bremen	Maumee	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.05	T.	.....	.....	.....	.....	.....	.17	.10	1.10	1.78
North Royalton	Lake	.24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.43	.....	.....	.....	.....	.....	.....	.....	.36	.....	.40	.....	.79	.....	.....	.....	.....	.....	.....	.....	.59	2.81
Norwalk ‖	....do	.10	.09	.....	.....	.....	.....	.....	.....	.02	.....	.....	.17	.....	.....	.....	.....	.....	.....	.....	.....	.17	.....	.07	.....	.....	.....	.....	.....	.....	.....	.08	0.70
Oberlin	....do	.29	T.	.....	.....	.....	.....	.....	.....	.01	.....	.....	.53	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.08	.....	.....	.....	.....	.....	.....	T.	.54	1.45
Ottawa	Maumee	T.	.30	.....	.....	.....	.....	.....	.....	.....	.....	.12	.....	.....	.....	.....	.....	.....	.02	T.	.....	.....	.04	.08	.....	.....	.....	.....	.....	.02	.19	.84	1.61
Sandusky	Lake	.14	T.	.....	.....	.....	.....	.....	T.	.05	T.	.20	.....	.....	.....	.....	.....	.01	.53	.01	.06	.....	.17	.09	.....	.....	.....	.....	.03	T.	.....	.43	1.72
Tiffin	Sandusky	.15	.....	T.	.....	.....	.....	.....	.....	T.	.02	.16	T.	.....	.....	.....	.....	.....	T.	T.	.....	T.	.....	.12	.....	.....	.....	.....	1.52	.15	.13	.5	2.78
Toledo (1)	Maumee	.28	.....	.....	.....	.....	.....	.....	.....	.01	.03	T.	.....	.....	.....	.....	.....	.46	.03	T.	.....	.....	.02	.02	.....	T.	.....	.....	.08	.02	.....	.08	1.63
Toledo (2)	....do	.50	.02	.....	.....	.....	.....	.....	.....	.02	.04	T.	.....	.....	.....	.....	.....	.....	.56	T.	T.	.....	T.	.06	.....	.....	.....	.....	.....	.15	.....	.0(	1.41
Upper Sandusky	Sandusky	.50	.....	T.	.....	.....	.....	.....	.....	.05	.....	.05	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.15	.....	.05	.....	.....	.....	.20	.....	.50	.60	2.10
Vickery	Lake	1.01	.....	.....	.....	.....	.....	.....	.....	.....	.03	.01	.....	.....	.....	.....	.....	.....	.22	.....	.....	.....	.05	T.	.....	.....	.....	.....	.....	.10	.....	.37	1.79
Wauseon ‖	Maumee	.03	.02	T.	.....	.....	.....	.....	.....	.02	.04	T.	.....	.....	.....	.....	.....	.....	.08	.....	.....	.01	.03	.19	.12	.....	.....	.....	.02	.25	.....	.02	0.83
Willoughby	Lake	.43	.04	.....	.....	.....	.....	.....	.....	.02	.....	.....	.13	.....	.....	.....	.....	.18	.....	.25	.....	.07	.....	.11	.....	.....	.....	.....	.....	.....	.....	1.09	2.32
Pennsylvania.																																	
Erie	Lake	.79	.02	.....	.....	.....	.....	.....	.....	.01	.03	.48	.03	.....	.....	.....	.10	.11	.03	T.	.....	T.	.31	.21	.04	.....	.....	.....	.....	T.	.....	.33	2.49
New York.																																	
Adams Center	L. Ontario	.07	T.	T.	T.	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....	.03	.....	.07	.48	.....	.....	.....	.22	.....	T.	.....	.....	.....	.....	.....	.05	0.92
Angelica	Genesee	.28	T.	T.	.....	.....	.....	.....	.....	T.	.08	.....	.04	.....	.....	.....	.09	.17	.....	.37	.11	.....	.....	.37	.16	.02	.....	.....	.....	.....	.....	.62	2.31
Appleton	L. Ontario	.50	T.	T.	.....	.....	.....	.....	.....	T.	.02	.....	.25	.....	.....	.....	.08	.04	.....	.....	.....	.....	T.	.....	.22	.....	.....	.....	T.	.....	.....	.35	1.46
Auburn	Oswego	.50	T.	.06	.....	.....	.....	.....	.....	.....	.10	.....	.....	.....	.....	.....	.04	.....	.35	.07	T.	.....	.....	.22	.....	.....	.....	.....	.....	.....	.....	.55	1.89
Avon	Genesee	.32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.05	.....	.....	.07	.....	.....	.....	.....	1.23	.19	.09	.....	.....	.....	.....	.....	.94	2.89
Blue Mountain Lake	Raquette	.43	.10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.38	.27	.....	.....	.....	.....	.....	.43	.52	.....	.....	.....	.....	.....	.37	2.50
Brockport	L. Ontario	.27	.02	.10	.....	.....	.....	.....	.....	.05	.02	.02	.37	.....	.....	.....	.03	.06	.....	.06	.05	.....	.04	.....	.05	.....	.....	.....	.....	.....	.....	.47	1.61
Buffalo	Lake Erie	.52	T.	T.	.....	.....	.....	.....	.....	.04	.01	.26	.....	.....	.....	T.	.14	.06	.02	.....	.....	.....	.....	T.	.03	.....	.....	.....	.....	.....	.....	.22	1.30
Canton	Grass	.99	.03	.02	.....	.....	.....	.....	.....	.....	.....	.02	.19	.....	.....	.20	.....	T.	.02	.89	.....	.....	.....	.23	.03	.05	.....	.....	.....	T.	.....	.32	2.99
Cape Vincent	St. Lawrence	.18	.78	.....	.....	.....	.....	.....	.....	.....	.....	.24	.....	.....	.....	.10	.....	.....	.30	.80	.....	.....	.....	.06	.....	.....	.....	.....	.....	.....	.....	1.25	3.71
Carvers Falls	L.Champlain	.18	.45	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.80	.....	.....	.....	.....	.....	.85	2.28
Chazy	....do	T.	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....	T.	.....	.....	.....	.....	T.	.....	.....	.05	.35	.....	.....	.....	.....	.....	.....	.....	0.40
Dannemora	....do	.17	.50	T.	.....	.....	.....	.....	.....	.....	.....	.....	.34	.....	.....	T.	.....	.....	.....	.....	T.	.....	.....	.62	.50	.....	.....	.....	.....	T.	.....	T.	2.13
Elba	L. Ontario	.60	T.	.01	.....	.....	.....	.....	.....	T.	T.	.20	.30	.....	.....	.....	T.	.10	.....	T.	.30	.....	.....	.....	.15	.....	.....	.....	.....	.....	.....	.40	2.06
Faust	Raquette	.46	.73	.30	.03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.25	.23	.....	.19	.....	.....	.....	1.03	.66	.16	.....	.....	.....	.....	.....	.....	4.04
Fayetteville	Oswego	.14	.38	.04	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.03	.04	.09	.03	.....	.....	.25	.44	.14	.....	.....	.....	.....	T.	.77	2.35
Gabriels	St. Regis	.16	.50	.15	.07	.....	.....	.....	.....	.....	.....	.....	.01	.....	.....	.....	.19	.....	.10	.....	.....	.05	.....	.72	1.00	.....	.....	.....	.....	.....	.....	T.	2.95
Harkness	L.Champlain	.02	.53	.04	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.02	.....	.....	.06	.28	.....	.....	.....	.....	.....	.....	.....	0.95
Hemlock Lake	Genesee	.23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.43	.....	.....	.....	.12	.....	.....	.....	.74	.....	.....	.....	.....	.....	.....	.....	.83	2.35
Horse Shoe	St. Lawrence	.33	.32	.38	.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.40	.....	.31	.34	.09	.....	.....	.....	2.60	.12	.03	T.	.....	.....	.....	T.	5.63
Hunt	Genesee	.47	.....	.....	.....	.....	.....	.....	.....	.....	.17	.....	.....	.....	.....	.....	.33	.....	.03	.....	.....	.....	.....	1.58	.....	.....	.....	.....	.....	.....	.....	.57	3.15
Ithaca	Oswego	1.10	T.	.01	.....	.....	.....	.....	.....	.....	T.	.....	T.	.....	.....	.....	.06	.07	.....	T.	.....	.....	.....	.22	.14	.....	.....	.....	T.	.....	.....	.64	2.24
Keene Valley	Ausable	.09	.14	.23	.11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.09	.....	.06	.03	.....	.....	.....	.04	.19	.14	.....	.....	.....	.....	.....	.05	1.17
King Ferry	Oswego	.44	.16	.....	.....	.....	.....	.....	.....	.....	.....	.06	.....	.....	.....	.....	.....	.05	.04	.....	T.	.....	.....	.....	.08	.04	.....	.....	T.	.....	.....	.49	1.36
Lake George	L.Champlain	T.	.48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	.06	.12	.....	.....	.02	.....	.23	.16	.....	.....	T.	.....	.....	.15	1.22
Lake Placid Club	Ausable, W. Branch.	.25	.56	.33	.25	.....	.....	.....	.08	.....	T.	.....	.....	.....	.05	.10	.21	.10	T.	.....	.....	.....	.....	.45	.71	T.	.....	.....	.....	.....	.....	.10	3.19
Le Roy	Genesee	.22	.03	T.	.....	.....	.....	.....	.....	.01	.10	.....	.47	.....	.....	.....	.05	.....	.....	.....	.52	.....	.....	.24	.32	.....	.....	.....	.....	.....	.....	.31	2.27
Lockport	L. Ontario	1.00	T.	.02	.....	.....	.....	.....	.....	T.	.05	.....	.26	.....	.....	.....	.04	.04	.....	.18	.....	.....	T.	.....	.01	.....	.....	.....	.....	.....	.....	.48	2.08
Lowville	Black	.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.33	T.	.....	.....	2.00	.10	T.	.....	.....	.....	.....	.....	.70	4.33
Moira	St. Lawrence	1.09	.64	.05	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....	T.	.22	.....	.....	T.	.....	.....	.....	.04	.....	.....	.....	.....	.....	.....	.....	T.	2.04
Nehasane	Black	.65	.70	.10	.02	.....	.....	.....	.....	.....	.....	.02	.....	.....	.....	.....	.27	.....	30	1.50	.....	.....	.....	1.01	.48	.20	.....	.....	.....	.....	.....	.....	5.25
North Lake	....do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Ogdensburg	St. Lawrence	.50	.26	T.	.....	.....	.....	.....	.....	.....	.....	T.	.12	.....	.....	.....	.12	.....	.....	.78	.....	.....	.....	.....	.20	.12	.....	.....	.....	T.	.....	.....	2.10
Old Forge	Black	.35	.49	.13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.10	.43	.....	.....	.....	.67	.81	.09	.....	.....	.....	.....	.....	.10	3.17
Oswego	L. Ontario	.11	T.	T.	.....	.....	.....	.....	.....	.....	T.	T.	.....	.....	.....	T.	.05	.....	.05	.11	.35	.....	.....	.39	.07	.....	.....	.....	.....	.....	.....	.67	1.80
Otto	Lake Erie	.29	.06	T.	.....	.....	.....	.....	.....	.....	.....	.....	.29	.10	.....	.....	.....	.....	.....	.18	.03	.....	.....	.....	.15	.....	.....	.....	.....	T.	.....	.24	1.34
Palermo	L. Ontario	.41	.02	.01	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	.....	.....	.....	.05	.....	T.	.....	.....	.02	.....	.....	.....	.....	.....	.....	.....	.80	1.31
Perry City	Oswego	1.07	.....	.02	.....	.....	.....	.....	.....	.....	.....	.02	.....	.....	.....	.....	.03	.13	.....	.....	.....	.....	.....	.....	.14	.....	.....	.....	.....	.....	.....	.75	2.16
Philadelphia	St. Lawrence	.29	.37	.01	.....	.....	.....	.....	.....	.....	.....	.03	.28	.....	.....	.....	.22	.....	.17	.95	T.	.....	.....	.87	.17	.13	.....	.....	.....	T.	.....	.12	3.61
Potsdam ‖	Raquette	.....	.09	.01	.....	.....	.....	.....	.....	.....	.....	.....	.35	.....	.....	.....	.14	.01	.....	.....	.32	.....	.....	.....	.34	.06	.02	.....	.....	.....	.....	.....	1.34
Raquette Lake	....do	.31	.55	.18	.06	.....	.....	.....	.....	.....	.....	.02	.....	.....	.....	.....	.11	.....	.35	.48	.....	.....	.....	.25	.97	.19	.....	.08	.....	.....	.....	.....	3.55
Rochester	Genesee	.29	T.	.15	.....	.....	.....	.....	.....	T.	T.	.24	.03	.....	.....	.....	.05	.....	.04	.06	.....	.....	.....	.53	.09	.....	.....	.....	.....	.....	.....	.62	2.10
Romulus	Oswego	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Scottsville	....do	.56	.....	.09	.....	.....	.....	.....	.....	.....	.02	.38	.....	.....	.....	.....	.....	.18	.....	.....	.....	.....	.14	.....	1.29	.....	.08	.....	.....	.....	.....	.96	3.70
Shortsville	....do	.86	T.	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	T.	.13	.03	.07	.....	.....	.....	.07	.08	.....	.....	.....	.....	.....	.....	.75	1.99
Skaneateles	....do	.18	.40	.13	.....	.....	.....	.....	.....	.....	T.	T.	.....	.....	.....	T.	.03	.04	.37	.35	.....	.....	T.	T.	.16	.05	.....	.....	.....	.17	.....	.30	2.18
Syracuse	....do	.94	T.	T.	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	T.	.02	.....	.10	.05	T.	.....	T.	.30	.16	.04	.....	.....	.01	.....	.....	.59	2.21
Ticonderoga	L.Champlain	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tupper Lake	Raquette	.46	.73	.30	.03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.25	.23	.....	.19	.....	.....	.....	1.02	.66	.16	.....	.....	.....	.....	.....	.....	4.03
Volusia	Lake Erie	1.00	T.	.....	.....	.....	.....	.....	.....	.....	.04	.....	.25	.....	.....	.....	.15	.04	.....	.....	.....	.....	.....	.22	.....	.....	.....	.....	.....	.....	.....	.65	2.35
Wanakena	Oswegatchie	.22	.53	.23	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....	.60	.....	.27	.88	.....	.....	.....	.90	.28	.13	.....	.....	.....	.....	.....	.....	4.04
Wards Creek	Raquette	1.58	.....	.49	.26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.34	.....	.21	.05	.....	.....	.....	.11	.89	.....	.....	.....	.....	.....	.....	.....	3.93
Watertown	Black	.26	.03	T.	.....	.....	.....	.....	.....	.....	.....	T.	.18	.....	.....	.....	.10	.....	.09	1.94	.....	.....	.....	.07	.06	.02	.....	.....	.....	.....	.....	.20	2.95
Wedgewood	Oswego	.66	.04	.06	.....	.....	.....	.....	.....	.....	.03	.03	.....	.....	.....	.....	.06	.15	.....	.08	.....	.....	.....	.13	.13	.04	.....	.....	.....	.....	.....	.47	1.88
Westfield	Lake Erie	1.10	.01	T.	.....	.....	.....	.....	.....	T.	.01	.....	.31	.....	.....	.....	.19	.06	.....	.....	.....	.....	.....	.02	.....	.....	.....	.....	.....	.....	.....	.51	2.21
Youngstown	L. Ontario	.47	.....	.....	.....	.....	.....	.....	.....	.....	.03	T.	.....	.....	.....	.....	.07	.02	.....	.....	.....	.....	.....	.....	.31	.....	.....	.....	T.	.....	.....	.43	1.33
Vermont.																																	
Burlington	Champlain	.66	T.	.03	T.	.....	.....	.....	.....	T.	.....	T.	.....	.....	.....	.02	.....	T.	.....	.....	.....	.....	.....	.17	.07	.....	.....	.....	.....	T.	.....	.18	1.13
Cornwall	....do	T.	.40	.20	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....	.....	.....	.....	22	.....	.....	.....	.....	.40	.25	.....	.....	.....	.....	T.	.....	.10	1.57
Enosburg Falls	....do	.17	.60	T.	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.08	.48	.....	.12	T.	.....	.....	.....	T.	.25	.17	.....	.....	.....	.....	.....	.12	1.99
Northfield	....do	.30	.01	.02	.....	.....	.....	.....	.....	.....	.....	T.	.....	.....	.....	.03	T.	.....	.....	T.	.....	.....	.....	.....	.33	.06	.....	.....	.....	.....	.01	.23	0.99
Wells	....do	T.	.48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.14	.....	.....	.....	.....	.....	T.	.96	.05	.....	.....	.05	.....	.....	1.68

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for May, 1911. District No. 4, Lake region.*

Date.	Duluth, Minn.		Wisconsin.						Chicago, Ill.		Fort Wayne, Ind.		Michigan, upper peninsula.										Michigan, lower peninsula.					
			Florence.		Green Bay.		Milwaukee.						Escanaba.		Ewen.		Houghton.		Marquette.		Sault Ste. Marie.		Alpena.		Battle Creek.		Cadillac.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	36	28	34	25	38	26	36	32	43	37	71	40	35	25	31	25	34	27	32	28	38	24	43	28	64	38	60	22
2....	50	24	42	20	43	22	41	31	44	33	52	33	39	22	44	18	41	27	31	25	29	22	34	26	46	30	35	25
3....	55	31	52	20	54	30	56	35	59	37	57	31	46	25	50	25	48	28	42	25	42	24	47	22	60	*30	49	22
4....	65	33	59	21	61	33	49	40	54	44	63	35	51	31	60	17	59	30	54	34	48	30	55	28	60	30	54	26
5....	69	50	72	27	69	37	60	42	63	44	68	30	57	34	71	23	68	43	59	44	63	31	69	34	65	30	67	33
6....	71	49	74	44	70	43	64	47	68	51	74	35	58	41	72	46	73	42	77	47	71	35	75	39	71	35	70	44
7....	73	48	80	42	76	49	76	51	77	55	78	39	63	44	80	38	82	46	83	53	73	38	77	45	75	40	70	48
8....	75	45	77	51	65	53	73	55	77	58	82	42	58	47	73	40	73	45	61	48	62	40	73	50	80	49	71	45
9....	71	41	80	39	73	50	62	44	71	60	84	58	60	44	82	33	75	43	72	41	77	36	64	43	81	60	73	43
10....	52	38	71	56	74	52	83	50	87	52	89	59	58	47	72	45	65	43	73	40	62	47	52	44	84	60	76	53
11....	50	32	67	48	73	55	74	58	74	61	83	63	73	46	63	38	63	37	70	53	68	52	81	47	79	64	71	62
12....	56	31	60	35	59	40	64	43	76	47	82	54	60	37	52	33	44	33	56	35	53	34	66	36	72	54	65	42
13....	48	36	65	25	61	35	53	40	58	47	71	41	47	31	54	35	60	29	64	33	59	33	50	31	69	38	67	30
14....	62	44	68	41	71	45	64	44	72	53	79	41	56	41	55	38	70	43	71	46	62	37	54	43	73	43	67	45
15....	58	42	72	52	69	52	76	50	86	64	89	48	67	46	72	21	66	44	67	44	65	47	68	54	86	53	73	54
16....	45	39	55	48	66	51	67	50	89	69	91	57	52	46	65	45	45	41	51	38	54	47	57	42	86	62	68	58
17....	61	40	86	49	84	52	88	61	90	70	93	59	66	46	85	57	80	43	73	50	67	50	64	45	89	63	83	62
18....	81	40	82	58	86	60	88	68	92	72	94	65	66	54	87	64	92	51	84	60	81	49	81	52	91	68	82	61
19....	76	56	84	63	88	64	90	69	91	74	94	65	67	53	84	55	90	60	91	54	90	55	87	54	91	67	84	59
20....	70	52	77	60	80	63	76	53	83	61	90	70	70	52	74	57	73	54	66	52	80	57	85	58	88	69	83	65
21....	58	42	68	55	64	54	60	47	75	62	86	65	58	53	68	48	60	47	55	44	60	48	82	52	83	65	79	65
22....	48	41	63	52	62	54	61	48	69	60	84	63	60	51	60	48	53	45	48	41	70	52	62	50	84	64	78	63
23....	62	44	71	56	65	52	68	50	72	62	82	62	59	48	60	48	56	43	64	42	70	52	68	55	78	61	72	60
24....	57	44	74	50	79	53	78	57	77	58	84	51	65	51	70	47	58	46	58	43	58	42	64	52	85	60	70	53
25....	75	40	89	50	88	54	93	51	94	67	95	56	69	50	84	49	76	45	81	42	63	40	56	48	90	52	82	53
26....	52	43	83	56	87	58	86	65	94	71	97	59	70	54	90	58	63	50	71	45	79	47	68	48	92	68	92	63
27....	75	44	88	60	88	71	94	69	94	75	99	60	74	56	86	46	91	52	91	55	90	56	94	57	95	62	87	73
28....	64	46	74	54	72	60	72	59	78	61	98	61	72	55	66	48	62	52	65	51	61	48	82	55	89	62	80	65
29....	66	46	72	43	69	54	62	52	63	58	86	61	67	52	70	38	71	46	61	52	60	45	70	51	82	61	73	53
30....	56	40	64	41	67	52	62	53	70	58	72	53	64	57	70	38	67	45	64	47	72	42	61	46	75	53	73	47
31....	69	47	61	47	67	54	72	53	71	56	79	59	61	52	63	43	60	40	60	50	55	42	65	50	73	58	69	53
Mns..	61.5	41.2	69.8	44.8	69.9	49.3	69.3	50.5	74.5	57.4	82.1	52.1	60.3	44.7	68.2	40.8	65.1	42.6	64.4	43.9	63.9	42.0	65.6	44.7	78.6	54.6	71.7	49.9

Date.	Michigan, lower peninsula.						Ohio.								Erie, Pa.		New York.								Vermont.			
	Detroit.		Muskegon.		Saginaw, West Side.		Cleveland.		Lima.		Sandusky.		Toledo.				Buffalo.		Canton.		Rochester.		Syracuse.		Burlington.		Northfield.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	68	34	53	33	66	35	71	38	69	43	72	40	70	35	70	38	66	41	66	57	69	48	75	56	70	58	68	56
2....	42	32	39	30	40	28	40	34	47	32	43	35	46	33	38	32	41	31	61	34	48	32	56	31	60	35	60	34
3....	52	30	48	31	53	26	49	35	51	30	51	33	55	34	44	35	40	29	34	28	39	27	36	27	37	30	37	29
4....	57	38	50	32	58	31	51	41	60	33	55	38	58	41	50	38	45	35	52	29	51	30	49	31	50	29	47	29
5....	64	40	56	32	68	33	57	38	62	49	59	39	65	42	55	36	48	39	60	34	61	34	59	37	64	36	61	27
6....	68	48	60	34	73	39	62	41	69	37	64	43	70	49	61	43	53	45	68	42	70	42	67	47	70	39	68	29
7....	75	52	69	46	76	44	69	46	73	41	71	50	76	51	67	48	60	50	72	47	74	47	72	52	78	50	76	37
8....	78	57	66	48	80	50	74	52	77	44	74	56	80	58	71	50	70	52	76	49	77	49	76	51	82	50	81	36
9....	74	58	68	49	78	56	71	59	80	62	75	60	80	62	70	56	62	49	76	48	74	53	69	54	74	49	76	47
10....	75	57	79	54	80	54	84	61	85	65	88	60	85	59	76	56	72	51	68	48	73	52	75	51	65	48	67	40
11....	81	60	74	56	77	61	83	63	83	60	85	63	82	64	85	60	72	52	85	57	89	61	90	63	90	51	87	48
12....	77	46	60	50	71	53	77	47	75	59	78	52	80	50	74	49	66	48	75	59	76	48	76	63	79	65	82	53
13....	58	41	55	38	64	36	54	45	76	44	53	46	61	43	52	43	50	39	61	44	62	42	63	43	67	45	61	37
14....	65	45	69	50	68	41	65	47	72	40	59	50	61	49	61	44	71	42	71	35	68	41	70	43	70	38	70	30
15....	83	53	76	58	79	51	80	53	85	50	86	52	86	53	76	53	67	53	75	48	81	56	81	58	73	50	76	38
16....	77	61	70	58	71	58	78	63	88	60	84	62	87	66	72	56	67	54	61	46	63	51	70	53	63	44	65	38
17....	85	61	81	59	89	57	84	58	87	61	87	58	88	60	74	52	68	52	76	38	73	51	76	51	75	39	75	30
18....	86	67	82	62	90	63	86	68	90	65	89	65	90	68	81	68	72	58	81	59	84	64	83	65	78	56	78	50
19....	88	67	87	68	92	68	88	67	91	66	91	69	90	69	88	71	85	70	77	64	84	66	84	69	80	61	75	52
20....	87	68	82	55	89	69	89	65	88	69	91	68	87	71	86	71	88	70	87	67	92	71	88	66	88	65	84	62
21....	83	64	87	64	85	65	86	63	86	65	88	66	87	68	88	69	84	63	89	70	88	73	92	72	92	68	92	58
22....	86	64	74	61	89	66	89	67	85	65	81	68	87	69	86	67	94	68	93	66	92	70	92	70	91	70	93	59
23....	79	63	68	58	81	60	79	66	83	65	83	64	82	65	76	65	73	63	83	65	85	63	92	66	82	55	70	52
24....	75	56	69	50	75	56	72	61	80	52	77	58	78	58	71	61	66	58	74	57	74	59	73	60	63	54	56	49
25....	79	57	82	58	85	54	77	59	90	56	75	60	87	62	69	57	66	53	69	55	70	52	67	54	71	56	69	51
26....	88	64	83	58	88	63	79	66	93	63	87	70	93	69	80	61	82	56	79	52	78	56	77	53	78	52	78	50
27....	91	66	78	62	94	64	82	64	95	60	85	67	92	68	82	62	86	61	83	56	88	59	85	62	84	57	83	49
28....	92	68	78	52	89	67	87	69	93	66	89	70	95	68	90	70	80	69	87	63	93	66	91	68	90	65	91	53
29....	74	56	68	58	76	59	72	63	84	52	73	63	72	61	74	63	76	62	80	55	77	62	78	63	86	61	88	58
30....	72	54	77	59	74	53	65	60	73	54	67	61	72	60	68	59	77	56	72	48	73	57	78	58	72	52	73	45
31....	73	54	70	58	75	55	75	58	70	60	74	59	75	56	78	56	77	55	74	48	84	57	77	57	77	47	73	40
Mns..	75.2	54.2	69.6	51.0	76.5	52.1	73.4	55.4	78.7	53.8	75.3	56.3	78.0	56.8	71.4	54.5	68.5	52.4	73.1	50.6	74.5	52.9	74.7	54.6	74.2	50.8	72.9	44.1

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT NO. 5, UPPER MISSISSIPPI VALLEY.

GEO. M. CHAPPEL, District Editor.

GENERAL SUMMARY.

With the exception of the first 4 or 5 days, May, 1911, was a very pleasant month, favorable for all outdoor occupations and the rapid growth of vegetation. A cool wave spread over the upper Mississippi Valley on the 1st and continued until the 5th. It was attended by snow flurries over a part of the northern half of the district on the 1st and by freezing temperatures and killing frost on the morning of the 2d over all sections, except the extreme southern portion of Illinois; but vegetation was not far enough advanced generally to be injured. After the 4th, in the northwestern, and the 5th, in the eastern sections, the weather was unusually warm, the temperature being above the normal, except on 2 or 3 days between the 5th and 31st. It was exceptionally warm during the last decade, when maximum temperatures above 95° were recorded on 1 or more days in all sections.

The conditions during the second and third decades of the month were probably the most favorable that were ever experienced in this section of the country for planting, rapid germination of seed, and the growth of vegetation. The only thing lacking, from the viewpoint of the agriculturist, to have made the conditions perfect, was a sufficient amount of rainfall over the southern and middle sections of the district. The deficiency of moisture was not, however, enough to cause any material damage until near the end of the month, and then only in the southern third of the district. On the other hand, there was an excess of rainfall for the month in the extreme northern sections, where the drought was the most severe in the summer of 1910; and at the close of the month vegetation and soil conditions were never better in North Dakota, at that season of the year.

TEMPERATURE.

There was an excess of temperature in all of the States of the upper Mississippi Valley, and in many localities the maximum temperature was higher than was ever before recorded during the month of May. The monthly means for the several States are as follows: North Dakota, 55.1°, Minnesota, 60.2°; Wisconsin, 61.4°; Iowa, 65.3°; Missouri, 68.6°; Indiana, 65.6°; and Illinois, 67.8°, and the average departures ranged from +3.2° in North Dakota to +6° in Indiana. The first 4 or 5 days were cold in all parts of the district, and freezing temperatures and killing frosts were general on the morning of the 2d, and light frost on the 3d and 4th, well toward the southern limits of Illinois. After the 5th, the temperature rose rapidly, and, except on 2 or 3 days, was above the normal over the middle and southern sections, during the remainder of the month; freezing temperatures, however, occurred on the 11th and 12th in North Dakota and northern Minnesota, and killing frost occurred in Wisconsin as late as the 13th. Most of the time during the last decade, the temperature was excessively high, maximum temperatures above 95° being recorded on 1 or more days in all sections, except North Dakota, where the maximum for the month was recorded on the 14th.

The monthly mean temperature for the district, as shown by the records of 293 stations, is 63°, which is 5.4° above the normal. The highest monthly mean was 72.4° at Cairo, Ill., and the lowest, 50.6°, at Willow City, N. Dak. The highest temperature was 101° at Carbondale, Ill., on the 28th, and the lowest, 8°, at McKinney, N. Dak., on the 2d.

PRECIPITATION.

The precipitation was below the normal in all of the States in the district, except North Dakota and Wisconsin, the excess being quite general in North Dakota, but was made up in Wisconsin by heavy rains over a strip extending from the northeastern to the southwestern corner of the State, the southeastern and northwestern counties reporting a deficiency for the month. In Minnesota there was less than the normal rainfall over the southwestern and west-central counties, but there was an excess over the southeastern, east-central, and northern counties. In Iowa there was quite a large area in the northeastern quarter of the State, where the rainfall was considerably above the normal; but from Dubuque County southward to Missouri and over the Des Moines River Valley there was a decided deficiency, and the average for the section was below the normal. In Missouri and Indiana it was below the average at all stations, and there were only two stations in Illinois that reported an excess. The average amounts, with the departures from the normal, for the various States, are as follows: North Dakota, 3.52 inches, +1.28 inches; Minnesota, 3.46 inches, −0.20 inch; Wisconsin, 4.80 inches, +0.85 inch; Iowa, 4.05 inches, −0.44 inch; Missouri, 1.73 inches, −3.13 inches; Indiana, 2.75 inches, −1.44 inches; Illinois, 2.13 inches, −1.99 inches. Over the southern, middle, and eastern sections there was more or less precipitation on the 1st, part of which was in the form of snow over the northern portion of the central sections; but there was little or no rain in North Dakota and northern Minnesota until after the 7th, when showers were frequent and well distributed, and the amounts of rainfall exceeded the average for those sections. In other States in the district showers were

generally light and scattered between the 7th and 15th; but from the 19th to 23d, and from the 27th to 31st, the showers were quite general and the rainfall copious. In fact, most of the rain fell during the latter half of the month, and at the close of the month all vegetation was in fine condition, except in southern Illinois, where droughty conditions prevailed.

The average precipitation for the district, as shown by the records of 309 stations, is 3.56 inches, which is 0.52 inch below the normal. The greatest amount, 8.73 inches, occurred at Fayette, Iowa, and the least, 0.22 inch, at Cairo, Ill. The greatest amount in 24 consecutive hours, 4.20 inches, occurred at New London, Minn., on the 15th.

The average depth of unmelted snowfall was 0.3 inch. The greatest depth was 7 inches, at Hannah, N. Dak., and at many stations in all sections none occurred. Measurable precipitation occurred on an average of 9 days.

SUNSHINE AND CLOUDINESS.

The average number of clear days was 16; partly cloudy, 9; cloudy, 6. The duration of sunshine was considerably above the normal.

WIND.

Southwest winds prevailed. The highest velocity reported was 48 miles per hour, from the northeast, at Devils Lake, N. Dak., on the 26th.

SEVERE LOCAL STORMS.

Mr. Clarence J. Root, section director at Springfield Ill., reports that damaging local storms occurred in Tazewell and Woodford Counties, Ill., on the 28th, and that reports of deaths and damage by lightning were received at various times from different places in that State.

Mr. M. L. Fuller, local forecaster, Peoria, Ill., has kindly furnished the following report on the storm of the 28th at Pekin, Tazewell County, Ill.:

About 2 p. m. of May 28, unusually severe thunderstorms visited portions of Tazewell County, Ill., with heavy local downpours of rain, causing floods and washouts in places, and with hail or wind reported from some points. At Pekin, Ill., damage was done by wind to an amount variously estimated at $25,000 to $50,000. Many trees in the city, some of them a foot to 18 inches in diameter, were blown down, one street being rendered temporarily impassable. A few awnings, plate-glass windows, and roofs of buildings were wrecked. Along the river a pumping station built of concrete blocks was demolished, a railroad depot unroofed, and two or three ice houses badly broken up. Near one of the ice houses, two boys, Clyde Sakers, aged 17 years, and Frank Woodley, aged 13, were killed by flying wreckage. A total of seven other persons in the city were more or less injured. The damage wrought was chiefly to larger or exposed trees and exposed portions of buildings. The greatest destruction was along the river bank which rises somewhat abruptly 15 feet or so above a level mile or two of bottom lands. All wreckage appears to have been scattered in the same general direction. Although reported in the press as a "cyclone," the storm appears to have been a straight blow accompanied by the usual thunder-squall roll of agitated wind cloud.

The following is an extract from an account of a severe local storm at Cedar Rapids, Iowa, on May 19, 1911, as published in the Republican of that city, on May 20:

The most destructive storm in many years struck west Cedar Rapids last evening at about 6.45 o'clock, and the damage done to property will run up into the thousands of dollars, not counting the destruction of shade and fruit trees. The storm track was about two blocks wide, and extended diagonally toward the river. There was plenty of warning, as the black-looking clouds plainly heralded the storm's approach. The gusts of wind became stronger, and, when in a sudden fury, the gale swept with resistless force, trees were snapped and twisted off as easily as if they were made of glass. Wires were tangled and broken, putting the telephone and light service completely out of commission. The whole northwest portion of the west side was cut off from telephonic communication and thrown into darkness by the wrecking of a pole carrying the supply and feed wires up Fourth Street and throwing them across the trolley wire of the street railway company, on G Avenue. Great damage was done to the buildings at the Alamo. The skating rink and several other buildings were blown down, and others were badly damaged. Much of the fence surrounding the park was also blown down. In the vicinity of Kenwood, and between there and Twentieth Street, the storm seemed to concentrate its fury, and the damage done to houses and property will amount to several hundred dollars. Barns were unroofed, and doors and trees were scattered all along the boulevard. The building of the King-Crown Plaster Co. was badly wrecked. The lower two stories were constructed of concrete blocks, and the upper stories of wooden framework. The whole wooden top was caved in on the south and west sides and rent asunder and the concrete blocks were crushed. Large pieces of the building were carried more than a block, and timbers and boards went as far as the river. Several courses of the concrete blocks were caved in by the force of the wind, and the whole building was rendered a mass of ruins. Much minor damage was done, but no lives were lost, although several people were injured, and one seriously.

RIVERS.

Rivers are still below the normal stage, but a rise occurred during the latter half of the month.

Owing to good rains in the headwaters, both the Mississippi and Wisconsin Rivers rose steadily from about the middle of the month to near the close. The Wisconsin at Wausau, Wis., rose from 3.9 feet, on the 12th, to 6.7 feet on the 24th, and at Portage, Wis., from 3.6 feet on the 11th to 7.9 feet on the 28th. The Mississippi at La Crosse, Wis., rose from 2.1 feet on the 19th to 5 feet on the 27th; at Prairie du Chien, Wis., from 2.5 feet on the 15th to 6.4 feet on the 31st, and at Dubuque, Iowa, from 3 feet on the 20th to 6.7 feet on the 31st. After a year of very low water this rise was of decided benefit to most river interests, but higher water is needed for navigation.—*J. H. Spencer, local forecaster.*

Mr. J. M. Sherier, local forecaster, in charge of the Davenport, Iowa, river district, reports as follows:

Steadily rising stages in this river district during the last decade of May resulted from copious rains over the extreme northern portion of the watershed about the middle of the month. At the end of the month the stage of the Mississippi River at Muscatine, Iowa, was still lower than the corresponding time in 1910, but gauge readings between Dubuque and Davenport, Iowa, were generally higher than those of a year ago. The reading of 4.6 feet at Davenport on the 31st was exactly the same as recorded on that date last year.

The following item relative to steamboat traffic, on the Mississippi River in the vicinity of Burlington, Iowa, appeared in the Times-Republican, Marshalltown, Iowa, on May 8:

With the river showing an increased stage of water the steamboat men are feeling more encouraged, and last week was marked by a general awakening in traffic circles. The *St. Paul* and *Quincy*, huge liners of the Streckfus Co., were taken to St. Louis for alterations, and Capt. Blair went South en route to New Orleans with a large party of excursionists on the *Morning Star*. The *Helen Blair* has resumed her place in the Burlington-Davenport trade, and the *Keokuk* has started daily service south of Keokuk. The *Black Hawk* is coming every day from the south, and later on the *Columbia* will probably be put in the trade establishing a daily service from Davenport to this city.

ENGINEERING NOTES.

Muck work is being done on the streams in Iowa, with the view of conserving and developing the water power. Plans are already drawn and work will begin as soon as possible on a 4,000 to 6,000 horsepower hydroelectric plant, 10 miles below Fort Dodge Iowa, on the Des Moines River. The plant will cost approximately $600,000, and the dam will be the second largest in the State, rivaled only by the one on the Mississippi River, at Keokuk, Iowa. The dam will be built after the plan of the big Spear Fish project, and will develop a 40 or 50 foot head of water. The banks on both sides of the river for some distance above the site of the dam are high, but

considerable farm land will be inundated, as the water will be backed up almost to Fort Dodge. Engineers declare the dam will generate 4,000 horsepower on a 24-hour basis, and 6,000 on a 12-hour basis, and the power can be distributed easily to Fort Dodge, Webster City, Lehigh, and Boone.

Work has also been started by the Iowa Power Co. on the construction of a series of dams on the Skunk and Iowa Rivers, which, with auxiliary steam plants, will produce 100,000 horsepower for use by the cities in southeastern Iowa. The Oakland Dam, one of the six along the Skunk, is an old one taken over by the new company. It has been rebuilt, new machinery has been installed and it was ready for business May 1, the day set for the reopening of the Oakland mills. At Augusta, the property adjoining either side of the dam has been recently purchased, and work at Augusta will be started shortly on the southernmost dam. At Wapello, on the Iowa River, a trench 3 miles in length is to be dug to give a greater and more permanent fall, and to overcome any possibilities of danger by high water. Mount Pleasant has already contracted for a supply of the power, and the promoters are meeting with encouragement in other southeastern Iowa cities. With the completion of the mammoth dam at Keokuk, 300,000 horsepower will be developed by water power in that vicinity.—*Jackson Sentinel, Maquoketa, Iowa, May 4.*

DRAINING THE AMERICAN BOTTOMS.

By CLARENCE J. ROOT, Section Director, United States Weather Bureau.

The American Bottoms occupy the low flat ground lying along the east bank of the Mississippi River and extending from Alton to Chester, in Illinois. This is one of the most fertile sections of the United States, but it is in constant danger of flooding. The first flood in this region, of which there is a reliable record, was that of 1724. During this and many subsequent floods the greater part of this valuable land was inundated. The greatest flood was in 1844.

The portion of the American Bottoms lying opposite St. Louis, Mo., and extending northward to the mouth of the Missouri River contains the city of East St. Louis (population 58,574), the cities of Venice, Madison, and Granite City, the terminals of all railroads entering St. Louis from the east, and large areas of valuable farm land. This district is bordered on the west by the Mississippi River, and on the north, east, and south by a ridge of bluffs extending from the river at Alton, in a wide semicircle, to a point opposite the south end of the city of St. Louis.

In June, 1903, the Mississippi River reached a height of 38 feet on the Weather Bureau gauge at St. Louis. This was 8 feet above the flood stage. Seventy per cent of this low land in Illinois was submerged, including about one-half of the city of East St. Louis. Crops were ruined, railroad traffic demoralized, and business suspended. Several lives were lost and the property loss ran into millions.

In order to protect this region from a recurrence of this condition, and to provide interior drainage, an organization, known as the "East Side Levee and Sanitary District," was formed. The district contains 96 square miles. The protection will be obtained by constructing a system of levees and channels. The estimated cost of the entire undertaking will be $6,500,000, all of which will be borne by the district.

Cahokia Creek rises near Litchfield, Ill., flows southwestward, and leaves the bluffs near the northeast corner of the district. It then flows through the bottoms and empties into the Mississippi River in East St. Louis. This stream, with its tributaries, drains a watershed back of the bluffs of 259 square miles. It is a menace to the district, not only as a source of backwater from the Mississippi flowing into the lower part of the stream, but on account of the large volume of water drained from the hills into the bottoms during the spring freshets.

A diversion channel is being dug from a point where the creek leaves the bluffs, about 14 miles north of East St. Louis, directly west to the Mississippi River, a distance of 4½ miles. The earth from this channel is placed to form levees on both sides, the one on the south extending from the bluffs to the river. The channel is 100 feet wide at the bottom and is 12 to 18 feet deep. The levees are 12 to 18 feet high and are set back 50 feet from the edge of the cut.

The front levee will extend from the diversion channel to a point 4 miles below East St. Louis. It will be 19 miles long and will follow, approximately, the east bank of the Mississippi River. This levee will be 8 feet wide on the top, sloping both ways, the thickness at the 1903 flood line being 43 feet. It will be 3.6 feet higher than the 1844 flood, and at least 7 feet higher than the flood of 1903. The levee will be sodded to prevent washing, and where it is exposed to the force of the current or to wave wash, it will be faced with reenforced concrete. The owners of the land lying between the front levee and the railroad embankments have agreed to fill their land, thus giving added security to the levee and tending to prevent seepage.

Another levee will be built on the south, extending from the bluffs to the south end of the front levee. This will complete a wall around the entire district, every point of which will exceed in elevation the highest water ever known.

For the purpose of interior drainage for the district, the present bed of Cahokia Creek, from the diversion channel to a point about 6 miles northeast of East St. Louis, will be cleared of drift and other obstructions, to allow the proper discharge of water from the smaller branches, county ditches, and the lateral canals that will be dug to drain the low ground. From this point a canal, 80 feet wide at the bottom, will be constructed running south to the Mississippi River near East Carondelet. It will pass to the eastward of the city of East St. Louis. Flood gates will be provided near its mouth, and during the presence of high water in the Mississippi River they will be closed. The water will then be pumped into the river.

About 75 per cent of the diversion channel is completed, together with the adjoining levees. Work on the front levee, along the river, has not been started, but it is hoped to have it completed by 1913. The interior drainage canal will be the last work undertaken.

NOTE.—The writer is indebted to Mr. W. McK. Brown, cooperative observer, Weather Bureau, and assistant engineer, the East Side Levee and Sanitary District, for maps and notes concerning the work.

TABLE 1.—*Climatological data for May, 1911. District No. 5, Upper Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota.																				
Amenia	Cass	954	14	57.7	+ 3.1	90	14†	18	2	49	6.25	+ 3.52	2.25	0	6	17	1	13	nw.	C. E. Wood.
Bottineau	Bottineau	1,638	16	52.6	+ 0.9	86	17	16	1	49	2.28	+ 0.11	0.96	T.	12	14	6	11	se.	J. A. Kemp.
Cando	Towner	1,488	10	53.7[h]	+ 3.1	85	17	13	11	51[h]	2.67	+ 0.63	0.82	0	9	.....	.....	.....	.....	E. T. Judd.
Crosby	Divide	.....	5	51.6[h]	.....	88[h]	5	19[h]	2	51[h]	3.70	.....	1.17	T.	.....	.....	.....	.....	.....	H. C. Kaschau.
Devils Lake	Ramsey	1,482	6	54.0	+ 1.3	88	17	19	2	37	3.13	+ 0.93	0.84	T.	11	9	15	7	se.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	12	53.3	+ 5.1	89	6	12	2	48	2.58	− 0.08	1.37	T.	9	16	9	6	nw.	C. J. De Vore.
Dunseith	Rolette	.....	14	52.8	− 0.8	85	5	15	1	52	1.92	+ 0.29	0.35	0	8	17	3	11	s.	L. H. Trowbridge.
Edmore	Ramsey	1,524	6	54.8	.....	92	17	17	1†	47	3.37	.....	1.10	0	11	16	12	3	n.	H. R. Aslakson.
Forman	Sargent	1,249	17	61.6	+ 6.1	99	14	20	2	44	2.37	− 0.30	1.00	0	6	14	9	8	nw.	A. Maltby.
Grafton	Walsh	827	20	56.6	+ 3.7	91	17	20	2	46	3.76	+ 2.02	1.02	T.	11	14	9	8	se.	A. R. T. Wylie
Granville	McHenry	1,504	5	54.0	.....	92	13	13	2	48	1.73	.....	0.59	0	6	9	14	8	nw.	W. A. Christiansen.
Hannah	Cavalier	1,568	6	50.8	.....	87	17	12	2	52	3.56	.....	0.69	7.0	9	11	10	10	s.	J. Moffatt.
Hansboro	Towner	.....	3	52.1	.....	86	17	14	1†	48	2.95	.....	0.80	T.	12	16	5	10	nw.	Geo. Dale.
Hillsboro	Traill	901	6	58.1	.....	89	17	21	2	50	6.49	.....	1.46	0	11	19	7	5	nw.	F. E. Mayall.
Lakota	Nelson	1,519	5	52.4	.....	85	17	18	1†	43	4.42	.....	1.40	0	12	13	13	5	se.	C. R. Pettes.
Langdon	Cavalier	1,615	16	50.8	.....	83	18	18	1	48	2.79	.....	0.79	0	10	16	0	15	nw.	J. Woolner.
Larimore	Grand Forks	1,134	16	55.6	+ 3.3	87	18	19	2	45	7.54	+ 5.50	1.99	0	13	18	4	9	.....	J. Dexter Pierce.
Lisbon	Ransom	1,091	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. K. Adams.
McKinney	Renville	1,640	17	53.2	+ 0.8	89	5	8	2	55	2.76	+ 0.86	1.25	0	7	13	8	10	se.	N. P. Swenson.
Manfred	Wells	1,605	10	55.2	.....	89	17	13	1	68	2.20	.....	0.43	0	9	18	2	11	se.	P. B. Anderson.
Mayville	Traill	975	15	63.3	+ 8.3	89	17	24	1	42	5.22	+ 2.57	1.41	T.	10	22	2	7	nw.	W. C. Gould.
Minot	Ward	1,557	13	54.8	+ 1.6	88	6	13	2	48	2.09	− 0.37	0.70	0	9	21	2	8	e.	J. J. Bates.
Minto	Walsh	820	18	59.0[d]	+ 5.4	90	17	30	12	48[e]	5.03	+ 2.96	2.00	0	10	14	10	7	s.	S. S. Marsh.
Oriska	Barnes	1,270	6	57.3	.....	88	17	20	2	50	6.59	.....	2.18	0	8	19	7	5	n.	W. E. Williams.
Park River	Walsh	998	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Heyward.
Pembina	Pembina	789	13	54.2	.....	88	17	16	2	47	5.18	.....	1.80	.....	12	15	2	14	sw.	C. W. Shumaker.
Power	Richland	1,020	19	58.1	+ 3.3	95	17	16	2	46	5.02	+ 2.62	1.65	0	6	16	5	10	nw.	J. A. Power.
Pratt	McHenry	.....	6	53.8	.....	89	13	12	2	66	1.67	.....	0.49	0	8	16	8	7	nw.	W. B. Ahern.
Towner	....do	.....	3	55.1	.....	88	13†	12	1	51	1.90	.....	0.51	0	7	15	11	5	nw.	B. Bagley.
University	Grand Forks	830	19	57.1	+ 3.4	89	17	18	2	49	3.28	+ 0.74	1.02	0	12	19	7	5	n.	H. E. Simpson.
Wahpeton	Richland	962	19	58.4	+ 1.9	92	17	18	2	48	1.41	− 1.50	1.04	0	5	18	7	6	nw.	E. G. Burch.
Walhalla	Pembina	966	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Lee.
Westhope	Bottineau	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. W. Clark.
Willow City	....do	1,471	18	50.6	.....	88	17	10	1†	61	1.59	.....	0.39	0	8	10	14	7	nw.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	20	63.2	+ 5.6	91	25	29	3	39	4.90	+ 0.68	1.70	T.	8	14	16	1	se.	Edward Carey.
Alexandria	Douglas	1,391	17	60.2	+ 6.5	93	18	26	3	46	2.54	− 0.74	1.20	0	11	13	3	15	nw.	P. O. Unumb.
Angus	Polk	870	9	56.0	.....	90	17	15	2	49	2.71	.....	0.85	1.0	11	18	7	6	n.	John Nadvornik.
Bagley	Clearwater	.....	5	55.4	.....	89	17	18	3	53	3.63	.....	1.00	2.0	10	8	18	5	sw.	Jens. Nelson.
Beardsley	Bigstone	1,090	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Roy A. Smith.
Beaulieu	Mahnomen	1,200	9	59.0	.....	89	17†	18	3	47	5.36	.....	2.20	2.0	8	12	13	6	w.	Dr. P. A. Slattery.
Bird Island	Renville	1,039	21	62.1	+ 5.8	94	26	19	2	53	2.05	− 1.10	0.68	0	7	15	10	6	nw.	Dr. F. L. Puffer.
Caledonia	Houston	1,179	18	63.0	+ 6.0	90	26	28	2	29	5.04	+ 0.21	1.55	6.0	14	20	5	6	sw.	W. D. Belden.
Campbell	Wilken	984	2	58.8	.....	96	14	15	2	54	4.17	.....	1.10	0	10	17	2	12	nw.	J. T. Neisess.
Cass Lake	Cass	1,300	4	.....	.....	.....	.....	.....	.....	.....	5.45	.....	2.00	0	5	.....	.....	.....	.....	C. W Burns.
Collegeville	Stearns	1,282	18	62.7	+ 6.8	89	10†	28	1†	43	3.62	+ 0.74	2.16	0	8	19	6	6	nw.	Fridolin Tembreul.
Crookston	Polk	863	21	56.9	+ 3.6	89	17	21	1†	42	3.81	+ 0.93	0.56	.....	11	13	5	13	n.	A. G. Andersen.
Detroit	Becker	1,364	15	58.9	+ 6.4	96	26	18	3	51	3.18	− 0.50	1.10	.....	7	14	11	6	nw.	G. W. Peoples.
Ely	St. Louis	.....	.....	55.8	.....	89	25	25	1	44	2.90	.....	0.78	0	12	18	2	11	e.	Rev. W. H. Farrell.
Fairmont (near)	Martin	1,240	24	62.5	+ 6.2	89	17†	28	2	37	1.57	− 2.65	0.36	1.0	8	14	13	4	s.	W. F. Wherland.
Faribault	Rice	1,003	14	62.8	+ 6.2	91	10†	28	2†	42	2.95	− 0.53	1.15	0	10	17	9	5	sw.	Dr. A. C. Tanner.
Farmington	Dakota	902	23	64.2	+ 8.0	94	18	27	2	45	2.89	− 0.61	1.06	0	10	15	7	9	sw.	E. D. Akin.
Fergus Falls	Ottertail	1,210	19	60.8	+ 5.8	90	26	22	2	37	3.11	− 0.04	1.62	0	9	13	14	4	n.w.	C. E. Kissinger.
Fort Ripley	Crow Wing	1,136	4	60.0	.....	94	26	21	3	54	3.40	+ 0.24	1.30	0	6	20	2	9	n.	J. J. Tucker.
Fosston	Polk	1,289	2	56.8	.....	87	17	18	2	43	4.72	.....	1.46	1.9	13	15	13	3	nw.	O. N. Hem
Fram	Marshall	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. W. Clark.
Glencoe	McLeod	1,000	15	63.6	+ 7.6	91	17†	26	2†	46	1.64	− 2.35	0.50	0	6	19	11	1	s.	F. B. Reed.
Grand Meadow	Mower	1,338	23	61.4	+ 6.1	90	17†	26	1	41	6.57	+ 1.80	2.73	2.0	9	15	9	7	s.	C. F. Greening.
Gull Lake Dam	Cass	1,215	.....	61.5	.....	93	25	25	3	51	2.29	.....	0.88	0	8	14	16	1	s.	G. A. Williams.
Hallock	Kittson	815	12	55.7	+ 3.2	88	17	17	2	50	4.34	+ 1.90	1.30	.....	10	13	5	13	s.	D. A. Robertson.
Halstad	Norman	870	5	56.8	.....	89	17	15	2	48	5.76	.....	1.68	0	9	15	7	9	se.	A. G. Holstrom.
Hinckley	Pine	1,050	6	58.8	.....	91	26	24	2	47	3.79	.....	1.10	0	7	13	10	8	sw.[b]	W. R. Newman.
International Falls	Koochiching	1,112	3	56.0	.....	92	17	22	1	46	2.07	.....	0.48	T.	7	15	8	8	ne.	Rees Roe.
Itasca State Park	Clearwater	1,500	.....	60.4[d]	.....	96	18	19	3	53[d]	4.93	.....	2.00	.....	12	.....	.....	.....	sw.[b]	J. A. Stillwell.
Kelliher	Beltrami	.....	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Gilmour.
Lake Crystal	Blue Earth	.....	4	62.8	.....	91	26	28	2	35	2.30	.....	0.85	0	10	17	12	2	nw.	W. P. Cobb.
Leech Lake Dam	Cass	1,301	23	56.2	+ 5.5	88	17†	19	4	49	3.93	+ 0.59	1.35	0	12	5	22	4	w.	Hans Olson.
Litchfield	Meeker	1,134	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	N. Y. Taylor.
Little Fork	Koochiching	.....	.....	54.8	.....	92	17	15	3	54	1.73	.....	0.60	0	7	16	12	3	.....	O. C. Olson.
Long Prairie	Todd	1,299	19	60.6	+ 6.2	96	26	21	2	51	2.33	− 0.91	1.33	0	3	11	13	7	s.	A. L. Sheets.
Lynd	Lyon	1,175	19	61.8	+ 5.8	93	19	23	3	46	1.69	− 2.12	0.55	0	5	22	8	1	sw.	J. W. Rouse.
Mankato	Blue Earth	758	12	.....	.....	.....	.....	.....	.....	.....	2.48	− 1.10	0.90	T.	7	18	7	6	sw.	Sadie H. Blake.
Maple Plain	Hennepin	1,023	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. W. Richards.
Milaca	Millelacs	1,072	13	56.8[e]	+ 3.2	91	26	22	2	47[e]	4.66	+ 1.46	2.78	0	6	11[e]	14[e]	3[e]	nw.[e]	C. H. Foss.
Milan	Chippewa	955	17	61.4	+ 5.0	94	17†	20	2	46	1.05	− 2.25	0.35	0	7	3	26	2	se.	O. K. Opjorden.
Minneapolis	Hennepin	918	20	63.6	+ 6.1	92	26	30	2	39	4.10	+ 0.18	2.10	0	9	10	11	10	s.	U. S. Weather Bureau.
Montevideo	Chippewa	900	21	62.6	+ 6.3	97	18	23	2†	50	1.25	− 2.15	0.42	0	9	14	11	6	nw.	L. G. Moyer.
Moorhead	Clay	935	30	58.0	+ 3.2	93	26	21	2	49	3.92	+ 0.97	1.02	0.2	11	15	9	7	nw.	U. S. Weather Bureau.
Mora	Kanabec	.....	6	58.8	.....	96	18	23	3	57	4.03	.....	1.48	0	11	18	10	3	nw.	Hans Peterson.
Morris	Stevens	1,170	26	61.3	+ 5.8	93	10†	18	2	52	3.72	+ 0.75	2.85	0	9	22	6	3	s.	D. T. Wheaton.
New London	Kandiyohi	1,215	17	59.0	+ 4.0	90	10†	26	1	35	6.31	+ 3.24	4.20	0	8	20	10	1	sw.	Harold Swensen.
New Richland	Waseca	1,180	17	64.0	+ 6.6	90	17†	27	2	41	4.08	.....	1.95	.....	9	13	17	1	s.	N. O. Tyrholm.
New Ulm	Brown	791	31	63.3	+ 3.8	95	26	27	3	48	2.85	− 0.69	0.68	0	11	20	0	11	s.	A. L. Henle.
Osakis	Douglas	1,343	4	60.1	.....	92	26	21	3	42	2.24	.....	1.27	0	6	15	12	4	s.	J. B. Johnson.
Park Rapids	Hubbard	1,426	21	56.4[d]	+ 4.1	92	26	21	2	46[e]	3.16	− 0.05	1.03	.....	14	13[d]	2[d]	12[d]	nw.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	24	58.6	+ 6.5	91	26	21	1†	50	2.42	− 1.12	0.78	0	5	13	11	7	s.	Neil McKay.
Pokegama Falls	Itasca	1,280	24	56.2	+ 6.0	88	17†	19	2	48	3.50	+ 0.18	1.21	0	9	16	9	6	se.	A. L. Mampel.
Red Lake	Beltrami	1,152	3	56.8	.....	90	17	28	2†	44	2.07	.....	0.50	0	6	5	22	4	w.	A. C. Goddard.
Red Wing	Goodhue	680	15	.....	.....	.....	.....	.....	.....	.....	3.28	− 0.51	1.50	0	10	14	5	12	sw	Louis Bach.
Redwood Falls	Redwood	1,050	4	64.6	.....	94	17†	26	2	46	1.16	− 2.92	0.34	0	6	23	6	2	se.	N. B. Andersen.
Reeds Landing	Wabasha	681	16	.....	.....	.....	.....	.....	.....	.....	3.98	− 0.02	1.56	0	7	20	0	11	nw.	John Deschneau.
Rochester	Olmstead	991	6	63.3	.....	91	17	30	3	48	4.17	.....	1.22	0	7	16	2	13	s.	S. R. Case.
Roseau	Roseau	1,040	3	56.3	.....	90	17	18	2	51	3.52	.....	0.70	0	10	23	0	8	sw.	A. Waag.
St. Charles	Winona	850	20	63.4	+ 7.4	90	18	27	3†	41	4.33	+ 0.67	1.10	2.0	11	19	7	5	n.	S. W. Gleason.

TABLE 1.—*Climatological data for May, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota—Continued.																				
St. Cloud	Sherburne	1,020	33	62.7	+ 6.6	92	10†	26	2	49	5.86	+ 2.16	2.41	0	8	15	10	6	se.	J. H. Capser.
St. Paul	Ramsey	837	40	62.7	+ 4.5	90	17	29	2	37	3.99	+ 0.37	2.34	0	9	10	18	3	s.	U. S. Weather Bureau.
St. Peter	Nicollet	825	17	64.4	+ 7.0	89	18†	25	3	43	3.57	− 0.09	1.90	0	7	14	10	7	s.	F. W. Kruger.
Sandy Lake Dam	Aitkin	1,234	18	53.8	+ 1.8	84	25	21	2	38	3.47	+ 0.34	1.63	0	8	8	17	6	sw.	A. Newstrom.
State Sanatorium	Cass	.....	3	58.9	.....	89	17†	24	2	38	3.95	.....	1.27	0	13	18	9	4	e.	Dr. W. J. Marcley.
Stillwater	Washington	694	6	.....	.....	.....	.....	.....	.....	.....	2.04	.....	7.64	0	13	15	6	10	sw.	Oscar Ostrom.
Taylors Falls	Chisago	759	4	62.7	.....	92	18	23	3	48	3.39	.....	1.60	0	8	14	10	7	s.	Minneapolis Gen. Elec Co.
Warroad	Roseau	1,069	2	55.2	.....	89	17	14	2	49	3.12	.....	0.78	.....	8	17	7	7	e.	J. H. Sawyer.
West Concord	Dodge	1,232	2	62.7	.....	90	17	27	2†	44	4.09	.....	1.33	1.0	7	11	15	5	se.	H. H. Orcutt.
Winnebago	Faribault	1,100	12	64.4	+ 6.6	95	18	27	3	48	2.43	− 2.13	0.85	3.0	11	15	12	4	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	23	57.7	+ 6.2	89	17	26	1†	43	4.11	+ 0.19	1.04	0	14	18	7	6	nw.	John Duncan.
Winona	Winona	700	15	66.1	+ 6.7	94	26†	29	2	46	4.02	− 0.77	1.33	3.0	9	16	6	9	s.	P. C. Myers
Worthington	Nobles	1,593	16	62.0	+ 6.0	90	9†	26	2	46	2.43	− 1.54	1.04	0	7	20	5	6	s.	M. P. Manu.
Zumbrota	Goodhue	917	15	62.8	+ 5.3	89	18	27	3	43	5.39	.....	2.65	.....	9	15	13	3	nw.	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	20	60.4	+ 4.9	95	17†	17	2	55	1.52	− 1.88	0.46	0	7	17	3	11	nw.	I. T. Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	17	58.7	+ 4.8	89	26	19	2	44	5.47	.....	1.14	1.0	10	16	5	10	se.	Elton C. Larzelere.
Barron	Barron	1,115	20	60.1	+ 7.2	88	26	22	2†	45	3.68	− 0.61	1.20	0	10	18	12	1	sw.	Wm. A. Kent.
Beloit	Rock	750	45	64.2	+ 5.5	89	27	29	2	31	2.71	− 0.85	0.83	0	5	23	0	8	s.	Smith Observatory.
Big St. Germain Dam	Vilas	1,590	1	57.7	.....	91	26	13	2	49	4.08	.....	0.75	0	15	14	11	6	sw.	Oscar Brehmer.
Brodhead	Green	812	13	65.0	+ 5.8	92	25†	26	2	38	2.98	− 0.85	0.72	T.	8	18	11	2	sw.	Hector D. Kirkpatrick.
Burnett	Dodge	880	7	61.9	.....	87	26†	27	2	33	4.75	.....	0.77	T.	13	12	10	9	sw.	Geo. W. Smith.
Cottage Grove	Dane	888	.....	.....	.....	.....	.....	.....	.....	.....	4.04	.....	1.87	T.	9	14	9	8	sw.	John E. Mellish.
Darlington	Lafayette	867	5	63.3	.....	91	26†	24	2	49	4.05	.....	1.10	0	7	13	14	4	se.	S. P. Nelson.
Deerskin Dam	Forest	1,625	1	54.6	.....	90	26	12	2	51	7.28	.....	1.42	0	15	11	16	4	sw.	Wm. E. O'Neal.
Delavan	Walworth	920	20	64.0	+ 6.5	93	26	26	2	41	1.47	− 2.36	0.45	T.	11	16	10	5	sw.	Elwood S. Austin.
Dodgeville	Iowa	1,116	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. H. Butler.
Downing	Dunn	983	9	60.9[d]	.....	90[d]	17†	20[d]	4	49[d]	4.44[d]	.....	1.30[d]	T.	6[e]	3[e]	8[e]	17[e]	w.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	20	63.5	+ 6.5	92	26	27	2	43	5.52	+ 1.15	1.76	T.	15	15	14	2	sw.	Robert D. Whitford.
Grand Rapids	Wood	1,021	12	61.1	+ 4.8	91	26	21	2	44	6.93	+ 2.76	1.23	T.	14	16	5	10	s.	Willis B. Raymond.
Grantsburg	Burnett	1,095	20	61.2	+ 6.6	94	25	20	2	49	3.15	− 0.96	1.35	0	8	11	8	12	sw.	Theodore Olsen.
Hancock	Waushara	1,091	19	63.2	+ 6.6	93	26	23	2	41	7.40	+ 3.40	1.85	T.	14	14	7	10	sw.	Frederick B. Hamilton.
Hatfield	Jackson	973	17	60.4	+ 1.6	92	26	20	2	45	7.55	+ 2.92	1.72	0.2	13	11	13	7	w.	Walter S. Woods.
Hayward	Sawyer	1,197	20	59.2	+ 6.0	91	26	18	3	45	2.93	− 0.64	1.00	0	9	11	6	14	s.	William E. Swain.
Hillsboro	Vernon	1,000	20	61.0	+ 5.4	91	25	21	2	44	6.37	+ 2.03	1.55	1.0	12	14	11	6	sw.	Emil V. Wernick.
Koepenick	Langlade	1,683	20	57.0	+ 2.5	87	26	13	2	46	4.82	+ 1.20	0.90	2.0	12	0	24	7	sw.	Edward S. Koepenick.
Lac du Flambeau	Vilas	.....	1	59.2	.....	93	26	22	2	39	4.57	.....	1.74	0	10	17	5	9	s.	W. J. Lovett.
La Crosse	La Crosse	714	39	64.2	+ 4.7	91	26	26	2	36	5.20	+ 1.45	1.53	5.2	13	9	12	10	se.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	20	63.6	+ 6.6	91	27	27	2	35	2.96	− 1.19	0.90	0.4	10	12	15	4	sw.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	20	64.4	+ 6.2	90	25†	26	2	35	5.74	+ 1.39	2.63	0	10	.....	.....	.....	sw.	Edward Pollock.
Long Lake	Oneida	1,592	3	56.5	.....	92	26	9	2	55	4.88	.....	0.95	0	18	17	6	8	s.	Louie Frank.
Madison	Dane	974	42	63.4	+ 5.8	88	26	31	2	30	2.63	− 0.99	0.63	T.	10	12	10	9	sw.	U. S. Weather Bureau.
Mather	Juneau	962	7	61.2	.....	91	26	16	2	41	7.49	.....	1.08	T.	14	11	9	11	w.	Frank Evans.
Mauston	do	882	15	63.5	+ 7.4	90	26	27	2	41	7.12	+ 2.76	1.50	T.	12	16	9	6	sw.	Eugene L. Hitchcock.
Meadow Valley	do	974	20	61.6	+ 5.4	91	26	13	2	44	6.39	+ 2.10	0.88	4.0	12	6	24	1	se.	Charles H. Johnson.
Medford	Taylor	1,420	22	59.8	+ 5.9	88	26	20	2	42	5.60	+ 1.34	1.80	0	9	22	6	3	w.	Wm. Zeit.
Merrill	Lincoln	1,267	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. T. Hunter.
Minocqua	Oneida	1,604	7	58.0	.....	91	26	18	2	45	3.84	.....	0.80	0	18	12	13	6	s.	Benjamin W. Applebee.
Mondovi	Buffalo	738	3	62.6	.....	91	17	26	4	44	5.86	.....	2.25	0.5	12	13	13	5	sw.	Dr. Charles Hebard.
Mount Horeb	Dane	1,226	7	63.1	.....	88	25†	22	2	33	3.33	.....	0.82	T.	7	18	2	11	s.	W. M. Lewis.
Muscoda	Grant	666	2	65.7	.....	95	25	25	2	46	3.72	.....	0.91	0	10	15	7	9	s.	Wm. Hessler.
Neillsville	Clark	996	21	62.6	+ 7.1	94	26	22	2	45	7.56	+ 3.32	1.59	T.	10	14	1	16	nw.	Wm. Heaslett.
New Richmond	St. Croix	990	6	62.2	.....	93	17†	24	6	52	2.59	.....	0.67	0	13	.....	.....	.....	sw.	Franc A. R. Van Meter.
Osceola	Polk	806	20	60.8	+ 6.2	92	25	20	5	60	2.93	− 1.34	1.55	0	7	11	9	11	s.	Charles W. Staples.
Park Falls	Price	1,492	20	57.8	.....	91	26	15	2	48	3.10	.....	0.87	0	13	4	22	5	nw.	Flambeau Paper Co.
Portage	Columbia	809	22	64.7	+ 6.0	91	25†	27	2	42	6.16	+ 2.15	1.47	T.	10	19	8	4	sw.	James H. Martin.
Port Edwards	Wood	969	1	66.2	.....	92	26	26	2	36	6.68	.....	1.20	0	11	8	0	23	nw.	Nekoosa-Edwards Paper Co.
Prairie du Chien	Crawford	690	20	64.7	+ 4.3	94	25	28	3	44	4.83	+ 0.50	1.28	T.	11	15	3	13	s.	James A. Gillis.
Prentice	Price	1,551	13	56.6	+ 4.0	87	26†	16	2	44	4.53	+ 0.95	1.55	0.2	8	12	5	14	s.	Joseph G. Lash.
Rhinelander	Oneida	1,550	5	59.4	.....	90[d]	26	18	2	46	5.89	.....	1.96	T.	16	11	7	13	sw.	Rhinelander Power Co.
Sauk City	Sauk	758	3	65.2	.....	95	19	22	2†	41	4.50	.....	1.82	T.	4	13[e]	11[e]	4[e]	.....	Kilien Derleth.
Shullsburg	Lafayette	1,019	5	63.6	.....	87	10†	25	2	39	3.95	.....	1.32	T.	8	16	7	8	sw.	Harrison B. Chamberlain.
Solon Springs	Douglas	1,083	5	56.5	.....	93	26	18	4	51	3.80	.....	1.20	0	8	13	4	14	sw.	John M. Sayles.
Spooner	Washburn	1,104	17	60.2	+ 5.7	90	18†	23	1†	41	2.94	− 0.58	0.80	T.	12	13	9	9	s.	Horace A. Bresee.
Stanley	Chippewa	1,082	7	60.7	.....	88	26	23	2	40	4.60	.....	0.85	1.0	10	16	10	5	nw.	W. Humphrey Scott.
Stevens Point	Portage	1,113	18	61.6	+ 5.4	92	27	14	2	45	5.99	+ 1.90	2.10	2.0	10	16	9	6	nw.	Garry E. Culver.
Sugar Camp Dam	Oneida	1,582	1	.....	.....	.....	.....	.....	.....	.....	3.67	.....	0.80	0	14	.....	.....	.....	s.	Robert Hayes.
Twin Lakes Dam	Vilas	1,625	1	.....	.....	.....	.....	.....	.....	.....	5.44	.....	1.30	0	12	12	12	7	nw.	Albert D. Hansen.
Valley Junction	Monroe	930	19	62.4	+ 6.1	92	26	20	2	41	8.10	+ 3.13	1.21	3.0	15	12	10	9	se.	Frederick Muermann.
Viroqua	Vernon	1,412	21	64.2	+ 7.4	88	25†	30	1†	33	5.59	+ 0.73	1.30	1.0	14	12	12	7	s.	Henry E. Rogers.
Vudesare	Vilas	1,600	3	55.4	.....	90	26	12	2	48	4.32	.....	1.02	0.5	10	19	11	1	w.	Louis L. Thomas.
Watertown	Jefferson	824	20	63.3	+ 6.5	90	27	27	2	34	3.19	− 0.63	0.90	T.	10	15	13	3	s.	Charles J. Salick.
Waukesha	Waukesha	864	20	63.0	+ 5.8	92	25†	25	2	38	1.80	− 1.85	0.58	T.	6	11	19	1	sw.	Carroll College.
Wausau	Marathon	1,212	16	60.4	+ 5.0	90	26	21	2	40	6.03	+ 1.92	0.98	T.	12	15	9	7	s.	George H. Halder.
Weyerhaeuser	Rusk	1,297	9	58.7	.....	89	18†	19	2	46	3.85	.....	1.25	0	12	14	14	3	sw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	20	63.3	+ 6.3	90	26†	24	3	43	6.90	+ 2.84	1.60	0	9	17	0	14	nw.	Hans J. Haugh.
Iowa.																				
Albia	Monroe	959	13	66.8	+ 5.8	92	25†	32	2	38	4.52	+ 0.19	1.13	.....	13	15	8	8	sw.	J. I. Chenoweth.
Algona	Kossuth	1,213	37	64.2	+ 4.7	90	10†	30	1†	34	5.17	+ 1.49	2.12	2.0	9	22	3	6	s.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	20	63.6	+ 5.6	92	25	29	1	38	3.27	− 1.51	1.44	1.5	9	17	11	3	s.	David E. Hadden.
Amana	Iowa	721	35	65.8	+ 5.8	91	25†	30	2	36	4.35	− 0.05	0.88	T.	13	17	9	5	se.	C. Schadt.
Ames	Story	926	35	66.6	+ 7.1	94	18†	32	1†	38	7.04	+ 2.72	1.59	.....	14	.....	.....	.....	s.	Iowa State College.
Baxter	Jasper	998	11	65.8	+ 5.4	95	8†	30	2	37	4.60	− 0.60	1.53	T.	14	16	10	5	sw.	W. R. Vandike.
Belle Plaine	Benton	828	21	65.3	+ 5.8	93	25	29	2	36	4.04	− 0.62	1.06	T.	15	15	12	4	se.	S. P. Van Dike.
Belmond	Wright	.....	1	63.4	.....	91	25	29	3	37	4.61	.....	1.65	1.4	8	7	15	9	sw.	Geo. P. Hardwick.
Bloomfield	Davis	.....	4	.....	.....	94[b]	24†	.....	.....	41[b]	.....	.....	.....	.....	.....	.....	.....	.....	.....	Albert Power.
Bonaparte	Van Buren	.....	20	67.0	+ 4.7	91	25	30	2	38	2.61	− 1.42	0.84	.....	9	.....	.....	.....	.....	Hon. B. R. Vale.
Boone	Boone	1,134	6	65.4	.....	93	25	31	1†	39	6.07	.....	1.57	.....	11	19	6	6	s.	Carl Fritz Henning.
Britt	Hancock	1,236	14	62.8	+ 4.8	91	25	29	2†	39	5.17	+ 0.91	1.66	.....	12	16	11	4	s.	L. M. Goodman.
Buckingham	Tama	.....	11	.....	.....	.....	.....	.....	.....	.....	5.62	+ 1.82	1.46	.....	9	.....	.....	.....	.....	J. S. Guynn.

TABLE 1.—*Climatological data for May, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Iowa—Continued.																				
Burlington	Des Moines	544	15	67.6	+ 3.8	95	25†	31	2	40	1.23	− 2.62	0.35	.....	11	20	4	7	sw.	Max E. Poppe, jr.
Carroll	Carroll	1,265	21	63.7	+ 4.8	92	24	28	1	36	3.05	− 1.51	0.70	.....	10	18	5	8	nw.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	29	66.2	+ 6.2	95	25†	31	4	35	3.64	− 0.94	1.08	T.	12	23	1	7	s.	R. S. Toogood.
Charles City	Floyd	1,015	20	63.4	+ 3.9	91	25	30	1	35	5.87	+ 0.93	1.50	2.0	12	6	13	12	sw.	U. S. Weather Bureau.
Clear Lake	Cerro Gordo	1,241	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Oscar Stevens.
Clinton	Clinton	593	44	66.2	+ 6.0	93	25†	28	2	40	2.15	− 1.91	1.12	.....	7	17	11	3	s.	Luke Roberts.
Columbus Junction	Louisa	595	10	67.3	+ 5.1	93	25	31	2	35	2.26	− 1.62	0.58	.....	7	24	5	2	s.	J. B. Johnston.
Davenport	Scott	580	40	68.0	+ 6.5	93	25	33	2	34	2.25	− 1.94	1.33	0	9	17	9	5	sw.	U. S. Weather Bureau.
Decorah	Winnishiek	875	18	64.6	+ 5.4	97	25	23	3	41	5.69	+ 1.02	0.99	.....	11	.....	.....	.....	.....	F. H. Baker.
Delaware	Delaware	1,083	20	64.4	+ 6.1	89	25†	28	2	34	5.33	+ 1.14	1.53	.....	10	15	13	3	s.	William Ball.
Des Moines	Polk	861	33	65.9	+ 4.3	93	25	34	1	36	2.44	− 2.12	0.65	T.	11	7	9	15	sw.	U. S. Weather Bureau.
Dubuque	Dubuque	639	38	65.9	+ 5.1	91	25	31	2	31	2.84	− 1.48	0.83	T.	12	12	12	7	s.	Do.
Earlham	Madison	.....	9	65.4	.....	91	10†	31	2	42	3.25	.....	1.34	T.	8	15	4	12	s.	George Phillips.
Elkader	Clayton	727	32	65.7	+ 5.2	94	26	27	2†	44	5.69	+ 1.55	1.27	0.5	13	17	11	3	se.	Chas. Reinecke.
Elma	Howard	.....	2	62.7	.....	90	25†	26	3	40	5.02	.....	1.20	4.0	12	9	20	2	se.	H. A. Moore.
Estherville	Emmet	1,298	16	62.4	+ 5.2	92	17	29	2†	43	2.76	− 1.42	1.10	.....	9	25	0	6	s.	A. O. Peterson.
Fairfield	Jefferson	.....	27	67.0	+ 6.8	91	25	33	2	32	2.55	− 2.73	0.52	0	11	20	7	4	sw.	R. Monroe McKenzie.
Fayette	Fayette	1,003	21	63.4	+ 6.0	90	25†	27	2	40	8.73	+ 3.94	1.90	.....	13	17	7	7	sw.	R. Z. Latimer.
Forest City	Winnebago	1,226	17	63.4	+ 5.1	93	25	29	2†	42	4.62	+ 0.23	1.75	1.0	8	15	10	6	s.	J. A. Peters.
Fort Dodge	Webster	1,126	11	64.8	+ 4.8	98	25	30	1	41	4.71	+ 0.16	2.00	0.5	9	16	5	10	s.	J. F. Monk.
Fort Madison	Lee	516	62	.....	.....	.....	.....	.....	.....	.....	2.79	− 1.61	1.78	.....	5	9	16	6	sw.	Miss L. A. McCready.
Gilman	Marshall	1,052	12	.....	.....	.....	.....	.....	.....	.....	4.29	+ 0.47	1.08	.....	8	.....	.....	.....	.....	J. L. Wylie.
Grand Meadow	Clayton	1,180	20	63.6	+ 5.5	87	25†	30	1†	38	5.65	+ 0.79	1.24	2.0	13	13	12	6	se.	F. L. Williams.
Greene	Butler	.....	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. L. Cole.
Grinnell	Poweshiek	1,023	19	65.9	+ 6.2	93	25	30	2	37	3.47	− 1.12	0.73	T.	14	17	8	6	sw.	D. W. Brainard.
Grundy Center	Grundy	976	20	65.3	+ 6.8	98	27	30	1	40	6.38	+ 1.22	1.80	.....	11	21	0	10	s.	J. B. Calderwood.
Guthrie Center	Guthrie	1,077	16	65.2	+ 4.6	93	25	31	2	38	4.96	− 0.00	2.12	T.	10	17	5	9	sw.	D. G. Beardsley.
Hampton	Franklin	1,155	21	64.6	+ 6.3	93	25	29	1	38	5.50	+ 0.92	2.20	0	10	11	15	5	sw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	23	64.6	+ 5.2	93	25	29	2†	40	3.49	− 0.87	1.79	.....	8	22	7	2	sw.	Henry S. Wells.
Independence	Buchanan	921	47	64.6	+ 5.4	90	25	30	2	35	5.58	+ 1.42	2.25	T.	9	21	5	5	s.	R. E. Dudley.
Indianola	Warren	969	20	66.3	+ 5.6	92	25	33	2	35	2.53	− 2.11	0.75	T.	11	10	9	12	sw.	Prof. J. L. Tilton.
Iowa City	Johnson	683	51	64.8	+ 4.5	91	25	30	2†	35	4.74	+ 0.37	1.70	.....	11	16	1	14	sw.	Prof. A. G. Smith.
Iowa Falls	Hardin	1,170	18	63.1	+ 4.4	92	25	28	3	40	5.21	+ 1.01	1.08	1.5	11	18	3	10	sw.	J. B. Parmelee.
Jefferson	Greene	.....	12	66.4	.....	94	25	31	2	42	3.38	− 1.63	0.83	0	8	.....	.....	.....	se.	M. E. Hall.
Keokuk	Lee	547	40	70.2	+ 7.0	94	25	35	2	34	0.42	− 3.93	0.23	0	6	17	12	2	s.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	19	67.1	+ 4.5	95	25†	30	2†	44	2.14	− 2.23	0.59	.....	10	7	16	8	.....	J. H. Landes.
Knoxville	Marion	920	16	66.6	+ 4.4	92	25	33	2	38	3.37	− 0.20	1.35	.....	9	12	10	9	sw.	Casey & Bellville.
Lacona	Warren	.....	12	.....	.....	.....	.....	.....	.....	.....	3.56	− 1.66	1.48	0	14	5	20	6	.....	J. B. Alter.
Le Claire	Scott	576	11	.....	.....	.....	.....	.....	.....	.....	2.62	− 1.17	1.41	0	11	.....	.....	.....	.....	Miss M. T. Disney.
Marshalltown	Marshall	947	19	66.2	+ 6.5	94	25	31	2	38	6.96	+ 2.23	2.30	.....	16	17	6	8	s.	Ralph B. Reasoner.
Mason City	Cerro Gordo	1,132	14	63.1	+ 4.7	91	25	28	3	38	5.38	+ 0.72	1.68	.....	9	15	11	5	s.	J. S. Mills.
Mount Pleasant	Henry	729	30	67.0	+ 4.8	92	26	31	2	37	3.03	− 1.15	1.02	0	10	15	14	2	sw.	J. W. Edwards.
Muscatine	Muscatine	.....	51	.....	.....	.....	.....	.....	.....	.....	2.65	− 1.73	1.11	0	13	.....	.....	.....	.....	William Molis.
New Hampton	Chickasaw	1,169	14	63.6	+ 5.7	91	25	28	1	37	4.74	+ 0.10	1.12	.....	8	20	6	5	s.	A. F. Kemman.
Newton	Jasper	944	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. P. Beatty.
Northwood	Worth	1,222	15	62.2	+ 4.3	87	15	29	1†	36	4.46	− 0.52	.....	3.0	4	15	12	4	s.	Chas. H. Dwelle.
Olin	Jones	760	13	64.9	+ 4.9	94	26	24	2	40	4.86	+ 0.37	2.46	.....	8	.....	.....	.....	.....	M. H. Crissman.
Osage	Mitchell	1,184	24	64.8	+ 7.7	92	25	29	1	39	6.29	+ 1.53	2.50	.....	5	15	12	4	nw.	Dr. A. D. Bundy.
Oskaloosa	Mahaska	843	35	66.6	+ 6.2	92	25	32	2	35	2.63	− 1.05	1.10	T.	9	17	1	13	.....	Joseph Boyd.
Ottumwa	Wapello	649	16	.....	.....	.....	.....	32	2	.....	1.48	− 3.16	0.70	.....	5	18	5	8	w.	Chester Potter.
Pella	Marion	877	9	66.4	.....	92	25	30	2	39	3.74	.....	1.03	T.	11	26	1	4	s.	J. H. Ver Steeg.
Perry	Dallas	975	10	65.2	+ 3.3	93	25	31	2	33	3.85	− 1.15	1.18	T.	9	15	8	8	s.	Ed. S. Gray.
Plover	Pocahontas	1,426	15	64.4	+ 5.3	93	26	29	2†	37	3.56	− 0.71	1.10	.....	9	22	8	1	s.	J. S. Smith.
Pocahontas	do.	1,248	7	63.6	.....	91	25	29	2	36	3.74	.....	1.30	.....	11	20	7	4	s.	F. E. Hronek.
Ridgeway	Winneshiek	1,215	13	64.4	+ 4.8	91	25	33	1†	37	4.50	− 0.87	1.10	2.5	13	21	7	3	s.	Arthur Betts.
Rockwell City	Calhoun	.....	15	63.6	+ 4.1	94	25	29	2	40	5.35	+ 0.61	1.62	2.0	10	20	10	1	.....	C. M. Randall.
Sac City	Sac	1,278	35	64.5	+ 5.9	91	25	31	1†	35	3.70	− 0.53	1.17	3.0	10	14	8	9	sw.	E. N. Baily.
Saint Charles	Madison	1,070	10	66.0	+ 4.1	93	25	32	2	36	2.42	− 2.50	0.57	0	10	19	10	2	s.	R. D. Minard.
Sigourney	Keokuk	877	15	66.8	+ 3.8	92	16†	30	2	38	3.13	− 1.00	1.00	T.	11	3	26	2	sw.	J. T. Parker.
Stockport	Van Buren	745	9	67.0	.....	92	25†	29	2†	40	3.07	− 0.69	0.64	0	10	17	10	4	s.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	22	63.5	+ 5.9	88	18†	30	1†	32	2.48	− 1.40	1.26	T.	8	13	11	7	s.	Prof. Warren Ingold.
Stuart	Guthrie	1,216	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. P. Fox.
Tipton	Cedar	807	12	68.2	+ 7.7	94	25†	32	2	34	2.52	− 2.66	1.37	0	7	20	10	1	sw.	F. K. Gregg.
Toledo	Tama	856	17	65.7	+ 5.0	91	25	31	2	38	4.89	+ 0.70	1.35	T.	8	20	5	6	se.	I. F. Giger.
Wapello	Louisa	588	13	67.2	+ 4.6	89	25†	33	2	31	1.94	− 1.95	1.18	.....	6	22	8	1	s.	G. W. Schofield.
Washington	Washington	769	29	67.8	+ 6.8	93	25	34	2	35	2.40	− 1.11	1.05	.....	6	11	18	2	sw.	Wm. A. Cook.
Waterloo	Black Hawk	862	28	64.4	+ 4.9	91	25	31	2	35	6.27	+ 2.31	1.70	.....	13	21	2	8	sw.	Ralph B. Slippy.
Waukee	Dallas	1,039	8	65.3	.....	91	25	30	2	38	3.22	.....	1.39	T.	13	17	10	4	sw.	Samuel F. Foft.
Waverly	Bremer	948	15	64.5	+ 4.5	93	25	29	1†	40	4.79	+ 0.09	1.25	.....	10	10	17	4	s.	Earl C. Moore.
Webster City	Hamilton	.....	6	65.0	.....	92	25	29	2†	40	5.99	.....	1.83	.....	8	17	12	2	sw.	C. D. Carpenter.
West Bend	Palo Alto	1,197	18	63.6	+ 5.0	92	25	28	2	33	1.94	− 1.69	0.80	1.0	11	15	13	3	s.	Phil. Dorweiler.
Whitten	Hardin	1,036	14	63.8	+ 4.5	92	25	29	1†	44	7.83	+ 3.47	1.85	T.	9	.....	.....	.....	sw.	Dr. F. P. Butler.
Winterset	Madison	1,129	20	66.3	+ 5.1	93	25	32	2	38	2.78	− 1.68	1.10	T.	12	12	11	8	s.	Dr. Robt. S. Cooper.
Missouri.																				
Gorin	Scotland	700	25	.....	.....	.....	.....	.....	.....	.....	2.69	− 1.77	0.98	0	8	7	14	10	sw.	J. W. Pulliam.
Hannibal	Marion	534	19	69.4	+ 5.0	93	25	35	2	40	0.70	− 4.30	0.41	0	5	16	12	3	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	34	67.8	+ 4.4	93	24†	28	2	40	1.25	− 3.22	0.65	0	4	27	1	3	sw.	J. T. Farrell.
Mexico	Audrain	797	34	68.6	+ 4.4	95	25†	34	2	34	1.72	− 3.07	0.53	0	7	20	4	7	s.	J. F. Llewellyn.
Steffenville	Lewis	576	18	68.6	+ 5.3	93	26	34	2	38	1.45	− 4.12	0.95	0	7	16	14	1	sw.	Frank Hall.
Sublett	Adair	1,000	32	66.7	+ 4.5	90	24	32	2	38	3.40	− 2.14	1.00	0	7	16	10	5	s.	Lewis Spriggs.
Vandalia	Audrain	776	1	69.7	.....	95	25†	33	2	41	1.03	.....	1.00	0	2	26	0	5	sw.	C. B. Ellis.
Warrenton	Warren	865	22	69.6	+ 5.0	95	28	34	2	38	1.62	− 3.29	0.63	0	6	18	7	6	s.	Dr. J. H. Frick.
Indiana.																				
Collegeville	Jasper	.....	12	66.4	+ 5.3	97	27	28	5	43	2.43	− 1.84	0.73	0	7	12	15	4	w.	Otto Miller.
Knox	Starke	716	6	66.6	.....	92	27	29	5	36	2.94	.....	1.78	T.	9	20	8	3	s.	W. R. R. Tatman.
Laporte	Laporte	810	15	64.9	+ 6.6	96	27	27	3	42	3.07	− 1.04	1.46	T.	9	15	14	2	w.	Wm. M. Walton, jr.
Plymouth	Marshall	790	8	64.6	.....	90	27	30	3†	36	2.55	.....	1.15	T.	7	15	14	2	sw.	J. W. Siders.
Illinois.																				
Aledo	Mercer	738	11	66.7	+ 5.7	92	25	30	2	33	1.98	− 2.30	0.81	0	7	15	13	3	s.	William B. Frew.
Alexander	Morgan	670	18	68.2	+ 4.6	92	26†	30	2	35	2.25	− 1.93	1.28	0	7	16	12	3	sw.	George H. Hall.
Antioch	Lake	861	10	63.8	+ 6.7	94	27	28	2	30	3.10	− 0.82	1.00	0	6	16	10	5	ne.	J. C. James.

TABLE 1.—*Climatological data for May, 1911. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Illinois—Continued.																		
Astoria	Fulton	650	12	67.8	+ 6.0	93	26	30	2	38	1.14	− 2.56	0.52	T.	6	20	8	3	s.	Edward V. Bohl.
Aurora	Kane	687	32	64.8	+ 5.7	92	25†	28	2	40	2.31	− 1.77	0.76	0	6	13	11	7	sw.	W. Holden.
Bement	Piatt	700	4	67.6	.....	96	26	32	3	37	1.40	.....	0.79	0	5	24	2	5	s.	Rev. C. S. Adams.
Bloomington	McLean	840	20	69.4	+ 6.3	95	26†	29	2†	40	1.73	− 2.85	0.83	0	7	21	8	2	sw.	Prof. H. N. Pearce.
Cairo	Alexander	359	33	72.4	+ 4.9	96	28	43	2	28	0.22	− 3.61	0.12	0	4	15	13	3	s.	U. S. Weather Bureau.
Carbondale	Jackson	412	6	71.8	.....	101	28	35	4	44	1.47	− 2.05	0.68	0	7	23	3	5	sw.	State Normal University.
Carlinville	Macoupin	663	21	69.2	+ 5.1	96	26	32	2	39	2.49	− 1.81	1.72	0	7	23	5	3	sw.	W. T. Eddy.
Clinton	Dewitt	727	1	68.0	.....	94	26†	30	2	35	2.63	.....	1.24	0	8	24	6	1	sw.	J. F. Ziegler.
Coatsburg	Adams	763	19	69.1	+ 5.2	95	25†	33	2	39	1.42	− 2.75	1.02	0	4	26	3	2	s.	Dr. J. R. Lambert.
Colden	Union	656	28	71.4	+ 4.4	98	26†	39	3	33	1.31	− 3.18	0.83	0	4	19	9	3	s.	John Buck.
Dakota	Stephenson	929	6	63.8	.....	90	25†	27	2	37	2.97	.....	0.82	T.	9	14	15	2	w.	Rev. G. W. Kerstetter.
Decatur	Macon	685	20	69.0	+ 5.7	96	26†	32	3	37	3.60	− 0.48	2.92	0	7	24	4	3	sw.	Prof. J. H. Coonradt.
Dixon	Lee	725	21	66.0	+ 6.2	96	25	29	2	39	2.69	− 2.18	0.80	0	11	21	6	4	.....	H. U. Bardwell.
Du Quoin	Perry	459	23	70.6	+ 3.5	97	28	36	3	37	1.86	− 1.88	1.15	0	5	20	8	3	sw.	G. H. Knetzger.
Dwight	Livingston	600	18	67.8	+ 6.6	97	26	30	2†	37	2.79	− 0.75	1.21	0	8	14	10	7	sw.	Edward O. Welch.
Elgin	Kane	716	4	65.8	.....	94	26	30	2	37	1.24	.....	0.52	0	5	10	19	2	sw.	Elgin Observatory.
Galva	Henry	842	19	67.7	+ 6.6	95	25†	29	2	38	1.62	− 2.41	0.51	0	13	21	1	9	sw.	Prof. F. U. White.
Greenville	Bond	635	33	69.7	+ 5.6	96	28	35	2	31	0.86	− 3.75	0.32	0	5	19	8	4	sw.	M. S. Oudyn.
Griggsville	Pike	650	26	68.7	+ 4.7	92	26	33	2	31	1.21	− 3.63	0.58	0	3	24	5	2	sw.	George F. Kneeland.
Havana	Mason	475	19	71.8	+ 7.7	96	26	33	2	37	1.51	− 2.26	0.46	0	4	20	10	1	s.	F. and C. Borgelt.
Henry	Marshall	500	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. F. A. Powell.
Hillsboro	Montgomery	675	17	68.8	+ 4.2	97	28	32	3	40	1.50	− 3.00	0.65	0	5	24	2	5	s.	Ira L. Woodward.
Joliet	Will	541	20	64.7	+ 4.0	92	18†	29	5	38	3.65	− 0.25	1.49	T.	8	17	8	6	sw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	23	64.4	+ 6.2	90	25†	28	2	38	2.55	− 1.52	0.75	T.	11	21	7	3	sw.	George Stevens.
La Grange	Cook	657	19	65.6	+ 7.1	96	26	28	2	39	2.44	− 1.24	0.73	0	8	17	6	8	sw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	32	69.0	+ 6.2	100	25	28	2	50	1.53	− 2.85	1.27	0	4	21	9	1	s.	George E. Campbell.
Lanark	Carroll	883	22	64.4	+ 5.6	90	26	24	2	40	4.58	+ 0.10	2.10	T.	11	21	9	1	s.	M. N. Wertz.
La Salle	La Salle	536	33	67.6	+ 6.8	95	25	32	2	36	1.97	− 1.95	1.63	0	4	14	12	5	sw.	U. S. Weather Bureau.
Lincoln	Logan	482	23	67.8	+ 4.9	92	27	28	3	37	1.79	− 2.03	0.80	0	6	17	13	1	s.	Prof. C. S. Oglevee.
Martinton	Iroquois	633	24	68.4	+ 7.8	98	26	30	5	42	5.79	+ 1.05	3.94	0	6	21	8	2	sw.	Joseph H. Peltier.
Mascoutah	Saint Clair	425	21	70.6	+ 6.1	100	28	34	3	45	1.68	− 3.13	1.27	0	5	26	4	1	se.	George Henrich.
Minonk	Woodford	745	18	69.6	+ 7.0	98	26	34	4	44	1.32	− 2.38	0.70	0	5	21	9	1	sw.	O. M. Davison.
Monmouth	Warren	784	19	68.6	+ 6.3	96	25†	29	2	40	1.53	− 2.33	0.41	0	8	20	1	10	s.	Hugh R. Moffet.
Morrison	Whiteside	685	17	65.1	+ 4.9	91	26	28	2	36	2.67	− 2.03	1.11	T.	10	20	7	4	sw.	S. A. Maxwell.
Morrisonville	Christian	638	12	70.2[5]	+ 6.9	94	26†	32	3	39[9]	0.67	− 2.84	0.33	0	5	25	5	1	s.	J. D. Lowis.
Mount Vernon	Jefferson	511	17	70.4	+ 4.4	99	27	36	3	40	1.06	− 2.76	0.85	0	4	21	7	3	s.	Theodore P. Stelle.
Oregon	Ogle	702	2	67.2	.....	93	27	28	2	38	1.67	.....	0.60	0	4	10	8	13	s.	Samuel Ray.
Ottawa	La Salle	500	25	68.2	+ 6.8	97	26	31	3	40	2.64	− 1.55	0.83	0	6	17	7	7	sw.	Miss M. M. Harris.
Pana	Christian	692	25	69.2	+ 6.1	96	27	35	2	34	1.12	− 3.20	0.50	0	4	26	2	3	sw.	C. W. Sibley.
Peoria	Peoria	609	33	68.2	+ 6.5	95	26	30	2	39	1.03	− 3.23	0.76	0	7	13	10	8	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	9	68.8	.....	96	26	32	2†	38	2.26	.....	0.75	0	9	19	7	5	sw.	George Butterworth.
Riley	McHenry	956	52	63.8	+ 6.2	90	19	27	2	33	2.64	− 1.01	1.69	T.	8	10	10	11	sw.	John West James.
Rockford	Winnebago	763	19	65.5	+ 7.0	92	25†	29	2	34	2.98	− 1.17	0.71	0	13	22	3	6	.....	Hosmer C. Porter.
Rushville	Schuyler	670	20	68.9	+ 5.7	92	26	31	2	32	1.77	− 2.52	0.82	0	4	24	1	6	s.	H. F. Dyson.
St. Charles	Kane	700	16	65.0	+ 5.0	95	25†	28	2	41	2.02	− 2.13	0.56	0	10	13	17	1	sw.	Dr. William H. Bishop.
St. Peter	Fayette	.....	9	70.2	.....	97	26†	35	3	34	0.95	.....	0.45	0	3	18	12	1	sw.	M. L. Lansford.
Sparta	Randolph	538	25	70.4	+ 5.0	98	28	35	2†	38	1.46	− 2.44	0.46	0	5	20	9	2	e.	James A. Caldwell.
Springfield	Sangamon	644	33	70.1	+ 6.6	95	26	35	2	36	1.18	− 3.31	0.77	0	7	15	13	3	s.	U. S. Weather Bureau.
Streator	Lasalle	626	18	68.0	+ 6.5	97	26	28	3	42	2.33	− 1.14	0.86	0	10	27	3	1	sw.	Edward F. Sweetser.
Sullivan	Moultrie	530	11	69.0	+ 5.8	97	28	33	3	40	3.21	− 1.34	0.80	0	7	18	11	2	sw.	C. A. Corbin.
Sycamore	Dekalb	855	31	65.6	+ 7.3	97	25†	27	2	44	2.56	− 1.58	1.05	0	10	18	4	9	sw.	Miss E. J. Davis.
Walnut	Bureau	717	20	67.8	+ 5.5	94	26	30	2	37	2.60	− 1.79	0.80	0	10	19	10	2	s.	O. C. Nussle.
White Hall	Greene	573	3	67.6	.....	94	25†	29	2	43	1.10	.....	0.64	0	5	24	4	3	s.	Dr. R. A. Pritchett.
Windsor	Shelby	681	12	68.6	+ 5.7	96	26	30	3	39	4.46	− 1.05	2.25	0	7	14	13	4	sw.	Herbert Rose.
Winnebago	Winnebago	900	24	65.2	+ 6.9	93	26	28	2	38	2.75	− 1.50	0.74	T.	10	15	12	4	sw.	Frank Osborn.
Yorkville	Kendall	584	24	64.5	+ 6.3	92	18†	29	2	45	3.05	− 1.13	0.85	0	6	23	3	5	w.	Herman A. Grimwood.
Zion	Carroll	938	17	64.8	+ 5.2	91	25†	27	2	37	3.26	− 1.08	1.59	T.	8	22	6	3	sw.	Robert F. Gillogly.

[a], [b], [c], etc., indicate respectively 1, 2, 3, etc., days missing from the record.
** Temperatures are from observed readings of the dry bulb; means are computed from the observed readings.
† Also on other dates.
T Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 5, upper Mississippi Valley.*

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
North Dakota.																																	
Amenia	Red							T.		.70	T.	2.25	T.				1.50							T.			T.	.50			.30	1.00	6.25
Bottineau	Mouse									.32	.08	T.	.16				.11	.12		.04	.07				.02	.14		.96	.05		.21		2.28
Cando	Sheyenne									.58		.82				.13	.15	.43	.21						.09		.11	.15					2.67
Crosby	Mouse	T.						.02								*	*	*	*	*	*	*	1.47	.02	.43	.03	1.17	.48	.03	T.	.05		3.70
Devils Lake	Sheyenne									.69	.80	.19		.10		.15	.10	.01	.35	T.	T.						.65	.02		.07			3.13
Donnybrook	Mouse	T.						T.		.19						*	.43	.03	*	.24	T.				.07			1.37		.25	T.		2.58
Dunseith	do									.25	.26	.10				.25	.35		.15	T.					T.		.26	.30			T.		1.92
Edmore	Sheyenne										.70	1.10	.05		.30	.03		.03	.14	.07	T.				T.		.70	.19			.06		3.37
Forman	do							.11		.25	T.	1.00				.51	.10			T.			T.				T.	T.			.40		2.37
Grafton	Red										.48	1.02	.05	T.	.08	T.	.02		.39	.02	.04		T.				.90	.37			.39	T.	3.76
Granville	Mouse									T.		T.			.09	.35	.59								T.		.52		.05		.13		1.73
Hannah	Pembina									.30	.69	.70			.36	.04		.08		.22					.56		.61	T.					3.56
Hansboro	Red									.10	.15	.25			.80	.11	.03		.19		.04				.75		.37	.05			.11		2.95
Hillsboro	do							.09		.62	.75	1.46	.11			.39	1.35			.10							.36	.31			.95		6.49
Lakota	Sheyenne									.40	1.40	.50			.23	.05	.10	.10	.18		.05						.85	.38			.18		4.42
Langdon	Pembina										.51	.79	.63		.24				.07	.06	.03						.17	.23			.06		2.79
Larimore	Red									.37	.35	1.67	.23				.24	.01	.28	.18				.01			.16	1.93			1.99	.12	7.54
Lisbon	Sheyenne																																
McKinney	Mouse						T.			T.		T.		T.		*	1.00		.29	.12	T.				.10	T.	*	1.25		T.	T.		2.76
Manfred	Sheyenne									.41	.22	.05		.05		.42	.27		.10								.25				.43		2.20
Mayville	Red							T.		.30	.35	.78	.20			.23	1.41			.21	T.						1.04	.20			.50		5.32
Monot	Mouse										.04						.40	.30		.18							.13	.70	.01		.27	.06	2.09
Minto	Red									.37	.27	2.00		.10		.05		.71			.07		T.				.55	.58			.33		5.03
Oriska	Sheyenne							.05		.30	1.67	2.18				1.08							.02					.68			.61		6.59
Park River	Red																																
Pembina	do										.20	1.80	1.30		.60	.20		.20	.04	T.	T.	T.				.50	.20	.04			.02	.08	5.18
Power	Sheyenne							.05		.20	1.65					1.50											.57			1.05		5.02
Pratt	Mouse								T.	.07						.20	.37		.18	.05			T.				.49		.15	.16		1.67
Towner	do									.10				.37		.51	.28		.04								.30	.30		T.			1.90
University	Red							T.	T.	.59	1.02	.29	.10			.05	.01	.04	.13		T.				.04		.31	.14			.56		3.28
Wahpeton	do							T.	.15			.13				.05											.04				1.04		1.41
Walhalla	Pembina																																
Westhope	Mouse																																
Willow City	do							T.	.14		.04		.08		.30	.39			.07							.39		.18					1.59
Minnesota.																																	
Albert Lea	Mississippi	T.										.10		.50	.30	.05				1.25		1.70	.90	T.				.10			T.		4.90
Alexandria	do										.03	.03	T.		.08	.06	1.20			.07			T.	.16	.02			.10			.66	.13	2.54
Angus	Red									.06	.85	.53				.07	.05		.06		.09		.02				.10	.14			.74		2.71
Bagley	do							.08		.23	.40	.22			.42	.30	1.00										.19	.06			.73		3.63
Beardsley	Minnesota																																
Beaulieu	Red							.05		.34	.39	.80	.18			2.20			T.				T.				.40				1.00		5.36
Bird Island	Minnesota							T.				T.			.37	.38		T.		.68		.22	.01				.11				.28		2.05
Caledonia	Mississippi	.65	.46							T.	T.	.06			.93	.26	.04				1.55	.04	.15	.15	.06				.42	.01		.26	5.04
Campbell	Red								.02		.07	.20			.07	.70	1.10				T.			.02			.20				.94	.85	4.17
Cass Lake	Mississippi								T.		.50		.50					1.30									2.00					1.15	5.45
Collegeville	do							.08				T.			.20	2.16				.76		.07		.05			.06				.24		3.62
Crookston	Red							.04		.45	.34	.56	.50				.15			T.	T.			.05			.43	.40			.37	.52	3.81
Detroit	do								T.	T.	.15	.33	.40				1.10						T.	T.		T.	T.	.06			.55	.59	3.18
Ely	Rainy							.14			.35	.10	.02		.03	*	.57			.43			.45	.01			.01				.78	.01	2.90
Fairmont (near)	Minnesota	.13												T.	.02					.36		.35	.15	.16				.26			.14		1.57
Faribault	Mississippi	.52								.08					.15	.25	.08			.12		1.15	.41					.15			.04		2.95
Farmington	do	.05					T.			.08		.08			.33	.65				.12		1.06	.33	T.			.17				.02		2.89
Fergus Falls	Red							.02		T.	.12	.20	.01			1.01					.07		T.			.02	.04			1.62		3.11
Fort Ripley	Mississippi														.19	.92	1.30			.24		T.		.22	T.					T.	.53	3.40
Fosston	Red									.37	.80	.13	.06		.03	.20	1.46			.03			.02				.17	.59			.85	.01	4.72
Fram	do																																
Glencoe	Mississippi														.15	.45	.25					.50						.28			.01		1.64
Grand Meadow	do	1.13						T.				.14			.62	.07		T.		.52		2.73	.34						.38			.64	6.57
Gull Lake Dam	do							.05			.30	.02				.88	.14				.20			.20		T.					.50		2.29
Hallock	Red									.35	.30	1.30			1.00			.25		T.	.05		.07				.35	.07			.60		4.34
Halstad	do							T.		.46	.70	1.68	.11				.98			.15							T.	.50			.45	.73	5.76
Hinckley	St. Croix									T.		.37			.52	.87	.35			1.10				.35							.23		3.79
International Falls	Rainy										.30	.43	.10						.06				T.	T.			.45	.48			.25		2.07
Itasca State Park	Mississippi							.01	.01	.23	.62	.38	.12		.05	.40	1.00			T.			.03	T.			.21				.87		4.93
Kelliher	Red																																
Lake Crystal	Minnesota	.85													.30	.09		.08		.05		.38	.15	.02				.26			.12		2.30
Leech Lake Dam	Mississippi							.06		.15	.40	.07				.51	1.03			.06			.02				.11	.14			1.35	.03	3.93
Litchfield	do																																
Little Fork	Rainy										.40	.35	.04						.09								.60	.05			.20		1.73
Long Prairie	Mississippi															1.33			.25				T.	T.				T.			.75		2.33
Lynd	Minnesota							T.							.45	.22				.55		.43									.04		1.69
Mankato	do	.50													.37	.07							.90	.18					.31			.15	2.48
Maple Plain	Mississippi																																
Milaca	do							T.		.66					.36	2.78							.35		.38						.13		4.66
Milan	Minnesota							T.				T.			.09	.14				.29		.09	.04				.05				.35		1.05
Minneapolis	Mississippi							T.		T.	.05	T.		.15	.35	1.95	.83			T.		.49	.15				.10				.03		4.10
Montevideo	Minnesota	.04						T	.01			T.			.20	.08	.14			.42			.10	T.			.04				.22		1.25
Moorhead	Red								.08		.49	.56	.49	.04		.01	.52						.01				.69	.01			1.02		3.92
Mora	St. Croix									.26		.09			.36	1.48	.03		.03	1.22			.11	.20				.04			.21		4.03
Morris	Minnesota									T.		.07				2.85			.02		.02	.01	.02	.06				.06			.61		3.72
New London	Mississippi														.40	4.20	.25			.75		T.	.08	.12				.07			.44		6.31
New Richland	Minnesota	.42						T.		T.				.05	.82	.14				.09		1.95	.29					.18			.14		4.08
New Ulm	do	.44							T.		T.	.12			.51	.68	T.				.10	.25	.50	.10			T.	.02			.05	.08	2.85
Osakis	Mississippi							T.				T.				1.27	.02			.12			.02	.17							.64		2.24
Park Rapids	do								.07	.07	.15	.15	.20		.06		1.03			.03		.02	.02	.02				.27			.27	.80	3.16
Pine River Dam	do							T.			.38	T.				.75	.78			.07	T		T.	T.							.44		2.42
Pokegama Falls	do							.15			.11	.07				.29	1.21			.14			.03				.41				1.09		3.50
Red Lake	Red							T.		T.	.48	.20					.35						.10				.50				.44		2.07
Red Wing	Mississippi	.50							T.		.04				.22	.40	.04				.20		1.50	.18	T.				.06			.14	3.28
Redwood Falls	Minnesota														.34	.26				.17		.27	.02					T.			.10		1.16
Reeds Landing	Mississippi	.15								.01						1.20					1.56		.82		.08							.16	3.98
Rochester	do	.75										T.			T.	.65					1.22	.80	.50	.08					.17				4.17
Roseau	Red										.40	.70	.15		.22				.30	.17	.04						.70	.14			.70		3.52
St. Charles	Mississippi	1.10									.03	.05			.45	.55	.04				.94	.50	.35	.08						.24			4.33
St. Cloud	do							T.		.06		.03			.52	2.24				2.41		.15	.21								.24		5.86
St. Paul	do							T.		T.	.09	T.		.14	.49	2.14	.22		T.	T.		.54	.24				.12				.01		3.99
St. Peter	Minnesota	.23													.23	.90				.01		1.90	.10				.20						3.57
Sandy Lake Dam	Mississippi							.06			.41	T.				.37	1.63			.47			.05	.04							.44		3.47
State Sanatorium	do							.08		.08	.42	.03	.03		.06	.40	1.27						.02				.13	.18			1.24	.01	3.95
Stillwater	St. Croix	.12							.02		.04	.06			.52	.64	.03	.03				.05	.20	.07								.01	2.04

TABLE 2.—*Daily precipitation for May, 1911. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Minnesota—Con.																																	
Taylors Falls	St. Croix										.26	.52			.50	1.60	.42			.14		.15	.22	.24				.12			T.		3.39
Warroad	Rainy														.50				.20	.30						.78	.32				.24		3.12
West Concord	Mississippi	.40													.40	1.30				.28		1.33	.28					.10			T.		4.09
Winnebago [1]	Minnesota	.85										.05			.25	.07					.28	.22	.27	.15				.02	.20		T.	.07	2.43
Winnibigoshish	Mississippi								.07	.37	.08				.07	.28	.65			.03			.07	.02			.47	1.04			.89	.02	4.11
Winona	do	1.33						.05	.13	T.					.22	.26	T.			.90	.04	.45	.35	.34					T.				4.02
Worthington [1]	Des Moines	1.04													T.						.05	.14	.64	.44				.05				.07	2.43
Zumbrota	Mississippi	.64								.42					.22	.93				.30		2.65	.11	.05				.07			T.		5.39
South Dakota.																																	
Milbank [1]	Minnesota											.07				.05	.45			T.			.09	.31				.09			.46		1.52
Wisconsin.																																	
Antigo	Wisconsin	.10									.76					1.14	.25	T.		.50	.25	.75	1.00						.08		T.	.64	5.47
Barron	Chippewa									.20	.42					1.20	.12			.29		.25	.41	.08				.67			.04		3.68
Beloit	Rock								.83						.53							.55		.50					.30				2.71
Big St. Germain Dam	Wisconsin	T.							.02		.34	T.	T.		T.	.48	.24	.01	.75	.60	.41	.19	.17	.26				.29	.02		.13	.17	4.08
Brodhead	Rock	.72							T.	.20					.63						.41	.52	.20	.21					.09	T.			2.98
Burnett	do	.61							.03	T.	.52				.21	T.	.07	.23			.31	.77	.76	.48	.02				T.	.08		.66	4.75
Cottage Grove	do	.75	.04						.09						.58						.37	1.87	.24	.03					T.			.07	4.04
Darlington	do	.60							.30						.70						.30	1.10	.90									.15	4.05
Deerskin Dam	Wisconsin	.04							.05		.81				.13	.95	.45	.87	1.42	.81	.42	.65	.35	.58				.15				.20	7.28
Delavan	Rock	.45	T.						.07	.05					.11					.24	.04	.08	.15					T.	.15	.04	.09		1.47
Dodgeville [1]	do																																
Downing	Chippewa	T.								1.30	T.				1.18				.10		.62		T.					.62			T.	.62	4.44
Eau Claire	do	.52								.67	.01	.02			.05	.89	.05			1.76	.10	.35	.43	.55				.08	.02		.02		5.52
Grand Rapids [1]	Wisconsin	.72							.14	.05	1.23				.30	.46	.60	.65			.73	.40	.42	.65	.16				.36				6.93
Grantsburg	St. Croix									.12	T.				.35	1.35	T.		T.	.46		.10	.18	.30						.30			3.15
Hancock	Wisconsin	.58							.05	.25	1.85				.30	.63	.48				.75	.63	.08	.90	.10				.10			.70	7.40
Hatfield	Black	1.72								.26	.50				.16	.85	.26			.80	.42	.23	.35	.33				1.28	.29		T.		7.55
Hayward	St. Croix							T.		.22	.40				.10	1.00	.02			.32				.38				.17			.32		2.93
Hillsboro	Wisconsin	.85							T.	.16					.40	.13	.35			.91		.17	.56	.96				.29	.04			1.55	6.37
Koepenick	do	.20									.90				.30	.80	.40			.40	.50	.20	.20	.30					.12			.50	4.82
Lac du Flambeau	Chippewa										.49				.09	.69	.11	.42		1.74		.29		.24				.27			.23		4.57
La Crosse	Mississippi	1.17							.01	.23	T.				.62	.34	.03			1.53		.24	.05	.51				.34	.01			.12	5.20
Lake Mills	Rock	.90	T.						.03	.02	.02				.31		T.				.22	.18	.70	.10					T.	T.		.48	2.96
Lancaster	Mississippi	.75							.12						.74		.10	.28			.73	2.17	.46					.30			.09		5.74
Long Lake	Wisconsin	.08							.13		.76				.08	.95	.19	.06	.47	.62	.44	.12	.31	.18	.02			.24	.03		.14	.06	4.88
Madison	Rock	.48	T.						T.	.06					.58	T.	.02	.02		.25	.07	.63	.30	.22					T.	T.		T.	2.63
Mather [1]	Wisconsin	1.08	.65						.10		.80				.28	.68	.23	.27			1.03	.70	.22	.84	.15					.46	T.			7.49
Mauston	do	1.37								.05	1.50				.22	.25	.64				1.00	.55	.20	.52				.52				.30	7.12
Meadow Valley	do	.88							.30	.47	.74					.81	.42			.45	.32	.60	.24	.61				.55	T.		T.		6.39
Medford	Black	.25									.40						1.10	.15			1.80	.50	.10	.75					.55				5.60
Merrill	Wisconsin																																
Minocqua	do	.05							.03		.30				.09	.65	.12	.50	.01	.80	.28	.17	.09	.22	.02			.21	.10		.12	.08	3.84
Mondovi	Mississippi	.65								.41		T.			.05	.76	.04			2.25	.02	.61	.35	.58				.13			.01		5.86
Mount Horeb	Rock	.67													.63		.07	T.			.47	.82	.42	.25					T.	T.	T.		3.33
Muscoda [1]	Wisconsin	.52	.05												.48	.11	.32	T.			.91		.61	.44	T.				.13			.15	3.72
Neillsville	Black	1.59									1.40			.22	.20	.60	.23			1.15		.45		.65				1.07					7.56
New Richmond	St. Croix	.08							.03	.05		.08			.67	.40	.03			.08		.52	.08	.19				.36			.02		2.59
Osceola [1]	do									T.	.15				.35	1.55				.05		.43	.23					.17					2.93
Park Falls	Chippewa	T.								T.	.41				.09	.46	.10	.08		.87		.08	.07	.48				.18	.01		.08	.19	3.10
Portage	Wisconsin	.50	T.						.07	1.47					.2	.25				.38		.87	.6	.28							1.40		6.16
Port Edwards	do	1.00							.12	.14	1.20				.40	.30	.96				.72	.50		.9					.33				6.18
Prairie du Chien [1]	Mississippi	1.28	.22						T.	.02					.70	.48	.29				1.04		.04	.32	T.				.40	.04		T.	4.83
Prentice	Chippewa	.11								.4					T.	.52				1.55		.18		.87						.04	.81		4.53
Rhinelander	Wisconsin	.11							.08		.37				.11	1.9	.16		.23	.63	.67	.1	.24	.52				.22	.33		.05	.0	5.89
Sauk City	do	.95													1.40						*	1.82	.33						T.	T.			4.50
Shullsburg	Mississippi	.84							.27						.0							1.32	.0	.07					.12	.04			3.95
Solon Springs	St. Croix							T.			.50	.20			.20	1.20	.80			.50		T.	.20	.20				T.					3.80
Spooner	do									.18	.23		T.	T.	.1	.80	.0			.1		.3	.2	.19	.12			.1			.30		2.94
Stanley	Chippewa	.56								.12	.85					.73				.20	.80	.3	.13	.45				.3			T.		4.60
Stevens Point	Wisconsin	.20							*		2.10				.27	.61	1.25				.32	.2	.40	.55					T.		T.		5.99
Sugar Camp Dam	do								.80		.34				.14	.10	.22	.02	.30	.64	.28	.2	.18	.08				.1				.10	3.67
Twin Lakes Dam	do						.05				.92				.0	.75	.25	1.30		.89	.0	.3		.52				.1				.30	5.54
Valley Junction	do	.87							.3	.19	1.18				.31	.74	.41			.19	.97	.67	.21	1.21				.1	.51		T.	.09	8.10
Viroqua	Mississippi	.95							T.	.3	.10				.63	.0	.30			.02	1.30	.11	.47	.40				.4	.07		T.	.41	5.59
Vudesare	Wisconsin	T.	T.					T.	.05		.67		.10					1.02	.30	.0		.3	.30	.32				.5					4.32
Watertown [1]	Rock	.90								.05	.41			T.		.22	.08	T.		*	.74	.04	.22	.35	.18			T.	T.	T.			3.19
Waukesha	Fox	.48	T.							.58					.01								.30	.05					T.	T.		.38	1.80
Wausau	Wisconsin	.95							.23		.55		T.		.28	.75	.48				.98	.60	.08	.68					.39			.06	6.63
Weyerhauser	Chippewa									.11	.33	.02			.07	1.04	.08			1.25		.17	.10	.38				.2			.05		3.85
Whitehall	Mississippi	1.60								1.40					.20	.50	1.10			1.00		.60		.20				T.	.30				6.90
Iowa.																																	
Albia [1]	Des Moines	1.13	.02							.15			.30			.04					1.10	.97	.02	.02					.02	.17	.08	.50	4.52
Algona	do	2.12						T.						.35	.39					.55		.3	.88					.31	.03		T.	.15	5.17
Alta [1]	Raccoon	1.44													T.		T.				.70	.10	.28	.28					.02	.13	.02		.30	3.27
Amana	Iowa	.55								.10			.30		.88			.28		.32	.58	.10	.42	.04					.63	.06	.03			4.35
Ames	Skunk	1.30						.07	.01	T.		.02		.06	.82	T.	.02			.20		.82	.14					1.56	1.32	.01		.60	7.04
Baxter	do	.62						T.	.10			.21		.32	.43		.07			.80	.05	1.53	.04					.06	.31	.05		.01	4.60
Belle Plaine	Iowa	1.06							.29			.14			.86		.01	.04		.50	.38	.22	.04	.01				.20	.26	.01		.02	4.04
Belmond	do	1.65						T.						T.	.67					.42		1.03	.31					.0	.23			.25	4.61
Bloomfield	Mississippi								.15						.57						.41	.1		.09				.2	.20	.79		.06	
Bonaparte	Des Moines	.13													.84						.29	.12	.06					.6	.06	.34		.11	2.61
Boone [1]	do	1.57	T.									.11			.74	1.02	T.				.60	.35	.04	.06					.20	1.00		.38	6.07
Britt	Iowa	1.66						.08		T.				.58	.72					.58	.01	.08	.18	.01				.3	.30			.02	5.17
Buckingham	Cedar																																
Burlington [1]	Mississippi	.17	.10						.03	T.					.12					T.	.3	.22		.05					.03	.01	.10	.0	1.23
Carroll [1]	Raccoon										.41			.70						.41	.21	.63	.07				.04	.41	.04		.13		3.05
Cedar Rapids [1]	Cedar	.30	.04						.20	.10		.08			.73	.35			.18		.65	T.	.32	.35					.28			T.	3.64
Charles City	do	1.50							.02		.02			.02	1.26					1.24		1.24	.28					.20	.03		.01	.0	5.87
Clear Lake	do	.40					.20	.20												1.25		.90	.88										3.83
Clinton	Mississippi	.02													1.12			.04		.41		.41	.08						.07				2.15
Columbus Junction	Iowa	.58													.58					T.	.38	T.	T.	.22				.23	.14	.13			2.26
Davenport	Mississippi	.10							.01	T.					1.35			.17		.26	T.	.21	.04						.10	.03		T.	2.25
Decorah	do	.94										.18			.95		.14			.99		.51	.79	.17				.19	.03			.80	5.09
Delaware	do	.82							.18						1.53		T.	.14		T.	.75	.02	.40					1.37	.10			.02	5.33
Des Moines	Des Moines	.10						.28	T.		.27			.19	.46		T.			.20	T.	.53	.01	T.				T.	.37	.02	.01		2.44

TABLE 2.—*Daily precipitation for May, 1911. District No. 5*—Continued.

Stations.	Watershed	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		Total.
Iowa—Continued.																																	
Dubuque	Mississippi	.19							.21	T.					.52		T.	.14		.37	.01	.83	.48	.01				.05	T.	.02	.01		2.84
Earlham	Raccoon	.04								T.		.23		.13	.33					.84	T.	.29	.05						1.34	T.		T.	3.25
Elkader	Mississippi	1.20							.21						1.27		.10	.02		.40	.74	.35	.25	.20				.49	.04			.39	5.69
Elma	Wapsipini'n	1.00								T.		.02			1.20	T.				.78	.07	.65	.30	.12				.25	.03	T.	.03	.57	5.02
Estherville ‖	Des Moines	1.10										T.			.12	T.	T.				.10	.05	.20	.55				.25	.21		T.	.15	2.76
Fairfield	Skunk	.52							.07		.07				.08						.43	.18	.05					.29	.07	.41		.38	2.55
Fayette	Mississippi	1.15							.40		T.	.06			1.30		.33			1.78	.15	1.76	.25	.05				1.23	.20			.10	8.73
Forest City ‖	Cedar	1.10													.68						.69	1.06	.25						.17	.20		.47	4.62
Fort Dodge ‖	Des Moines	2.00							T.						.82	.20					.50	.22	.30	.25				T.	.17	.20		.47	4.71
Fort Madison	Mississippi	T.							T.	T.					.12					.55	1.78	T.	T.						.37	.05		T.	4.71
Gilman	Iowa	.77								T.		.17		.36	.85		T.	T.		.80		1.06	T.					T.		.28		.03	2.79
Grand Meadow	Mississippi	.92							.13	T.					1.03		.42			1.03	.21	.43	.30	.10				.78	.22	.03		.05	4.29
Greene	Cedar																																5.65
Grinnell	Iowa	.51							.35			.13		T.	.55		.03	.04		.54	.06	.73	.05				.08	.14	.19	.05			3.47
Grundy Center	Cedar	.78										.13			1.80		.14	T.		.70	.10	.88	.10					.50	1.10			.16	6.38
Guthrie Center	Raccoon	.08									.10			T.	.21	T.				.42	T.	.41	.14	.03				.01	1.62		T.	.03	4.96
Hampton	Cedar							T.	T.		.20			.19	.40					.30	.01	.25						.05	.50				5.50
Humboldt	Des Moines	1.79													.26		.07			1.17		2.20	.2					.11	.10		.22		3.49
Independence	Wapsipinic'n	T.													1.54		.10				2.25	.36	.21	.04				.75	.13			.20	5.58
Indianola	Des Moines	.10							.05	T.		.15		.03	.75	.05	T.			.56		.36	.07						.38	T.		.03	2.53
Iowa City ‖	Iowa	1.70	.04							.05					.40	.70					.60	T.	.58	.18					.27	.12	.10		4.74
Iowa Falls ‖	....do	.48	.15									.44			.73	.16		T.			.82	.65	1.08	.10				.15	.45	T.	T.		5.21
Jefferson	Raccoon	T.									.23				.83						.17	.26	.32	.12				.70				.75	3.38
Keokuk	Mississippi								T.						T.						.10	.13	.02	.06				.01		T.		.10	0.42
Keosauqua ‖	Des Moines	.30	.03												.59							.33	.02						.52	.04	.20	.09	2.14
Knoxville	....do	.20							.55			.23		.09	.65			T.		1.35		.04	T.					T.	.13	T.		.13	3.37
Lacona	....do	.30						.08	.02			.30		.18	.22					1.00	.48	.22	.08					.01	.06	.13		.48	3.66
Le Claire ‖	Mississippi	.30	.08						.03	T.					.14	1.41			T.	T.	.25	.02	.30	.05					.01	T.	.03		2.62
Marshalltown ‖	Iowa	.10	1.00					.02	.02			.08			.76	.11	T.	.60			1.31	2.30	.04	.06					.30	.16	.02	.08	6.96
Mason City	Cedar	1.00						.07		T.					.69						.37	1.08	.80					.44	.10			.23	5.38
Mt. Pleasant	Skunk	.33							.08	.01					1.02						.60	.15	.09					T.	.32	.31		.12	3.03
Muscatine ‖	Mississippi	.44	.09						.15	.02					.67	.44			T.		.33	T.	.03	.07					.06	.18	.08	.09	2.65
New Hampton	Wapsipinic'n	1.12													.70		T.																4.74
Newton	Skunk																				1.05	.40	1.06	.06				.21	.14		T.		
Northwood	Cedar	.30																															
Olin	Wapsipinic'n											*	*	4.16																			4.46
Osage	Cedar	1.62																															
Oskaloosa	Des Moines	.10	T.						.19	T.	.17			T.	1.10					.65		2.50	.42					T.	T.				6.29
Ottumwa	....do	.70							.10						T.		T.	T.		1.10	T.	.51	.03					T.	.18	.08	.27		2.63
Pella	....do	.38						T.	.25	T.		.36		.10	.51		T.	T.	.30	T.		.20		.18	T.								1.48
Perry	Raccoon	.45										.03			.91					.70	.07	1.03	T.					T.	.25	.06		.03	3.74
Plover	Des Moines	1.10						.01			T.			.20	.30		T.			.90		.23	.06						1.15	.03		.07	3.85
Pocahontas	....do	1.30												.27	.22					.55	T.	.60	.30					.20			.30		3.56
Ridgeway	Mississippi	.42								T.	.11			.08	1.02	.01	.04			.31		.63	.53	.12				.12	.04		.12	.08	3.74
Rockwell City	Raccoon	.45												.10	.60	T.				.77		.78	.12	.09				.64	.05			.37	4.50
Sac City	....do	.86										T.		.08	.26	T.				.50	.10	.98	.50					.10	.40		1.62		5.35
Saint Charles	Des Moines	.20										.30		.02	.40					.41	.04	1.17	.28					.07	.26		T.	.27	3.70
Sigourney	Skunk	.60							.08	T.		.03			.02		T.	T.		.26	.31		.13						.45	.02		.33	2.42
Stockport	....do	.52							.08						.53						.48	.03	.08	.12				1.00	.08	.07			3.13
Storm Lake	Raccoon	1.26									T.			T.	.02						.97	.08	.08					.10	.38	.64		.13	3.07
Stuart	....do																			.24	.07	.43	.01					.14			.31		2.48
Tipton	Cedar																																
Toledo	Iowa	1.35							.06	T.		.03			1.37						.34	.15	.14	.06					.34	.12	T.	T.	2.52
Wapello	Cedar	.25													1.25					1.05		.30	T.					.70	.15				4.89
Washington	Skunk	.17													1.18						.24	T.	T.					.06	.12	.09			1.94
Waterloo ‖	Cedar	1.25	.04							T.		T.				.38				.78		.02						.50	.55				2.40
Waukee	Raccoon	.15							.10			.22		.01	.66	T.	.03			.22	T.	.31	.05					T.	1.39	.03	.04	.01	3.22
Waverly	Cedar	1.25							.16			.05		.75						.95		.80	.10					.18	.40		.15		4.79
Webster City	Des Moines	1.83					T.	T.	T.			.13			1.45					.30		.64	.04					1.20	.40				5.99
West Bend	....do	.10					.13						.20	.60						.16	T.	.22	.40					.05	.03		.02	.03	1.94
Whitten	Iowa	1.75										.16		T.	1.16		T.			.73		1.85	.09					.67	1.22			.20	7.83
Winterset	Des Moines	.15						.07	T.			.24		.07	.30		.03			.17	T.	.28	.16	T.					1.10	.08		.13	2.78
Missouri.																																	
Gorin	Mississippi														.98						.34	.07	.10					.28	.27	.22		.43	2.69
Hannibal	....do	T.							T.												T.	.05	.03					T.	.17			.41	0.70
Louisiana	....do	.03																		.04		.50	.07						T.			.65	1.25
Mexico ‖	....do	.38	T.		.03										T.						.16	.25		T.					T.	.35	.02	.53	1.72
Steffenville	....do								T.						T.						.27	.05	.05					.03	.05	.05	T.	.95	1.45
Sublett	....do	T.													.50						.50							.20	.10	1.00	1.00	.10	3.40
Vandalia	....do																				.03										1.00	1.03	
Warrenton ‖	....do	.10	T.																			.63		.01					T.	.07	.37	.44	1.62
Indiana.																																	
Collegeville	Iroquois	.15								.73													.62	.08					.12		.58	.12	2.43
Knox	Kankakee	.22	T.						T.	.15											.19	.04	1.78	.03				T.	.15		.02	.36	2.94
Laporte	....do	.60								.10									T.		.22	.12	1.46	.03						.10	.04	.40	3.07
Plymouth	....do	.15	T.							.18											.06	T.	1.15							.53	.03	.45	2.55
Illinois.																																	
Aledo	Mississippi	.33							.22						.81						.48	.04	T.							.09		.01	1.98
Alexander	Illinois	.01							T.	.04											T.	1.28		.03					.19		.17	.53	2.25
Antioch	....do	.45							.20						T.						.30	.40								T.	.75	1.00	3.10
Astoria	....do	T.							.01	.01											.22	.33	T.						.52	T.	T.	.05	1.14
Aurora	....do	.29							.28												.55	.13	.30						.76				2.31
Bement	Mississippi	.23																				.79	.17						.20			.01	1.40
Bloomington	Illinois	.11																			.83	.01		.15					.55	.05		.03	1.73
Cairo	Mississippi			T.								.02	.10									.01	T.							T.		.09	0.22
Carbondale	....do	.68		.03								.14	.05																		.12	.38	1.47
Carlinville	Illinois	.11	.01																		T.	.07											
Carlyle	Mississippi	.90																			1.34	.38							.26	T.	.04	.35	2.49
Chester ‖	....do	1.54			T.									T.								.05								.25		.40	1.60
Clinton	Illinois	.12	T.						T.													.04								.06		.22	1.86
Coatsburg	Mississippi																				1.11	.02	.05					1.24	.05	.01	.03	2.63
Cobden	....do	.07		T.								.83									.20		.05					.15			1.02	1.42	
Dakota	....do	.55							.05		T.				.80						.25	.06							T.	T.	.35	1.31	
Decatur ‖	Illinois	.06							.01												T.	.39	.60	.22					.10		.01	2.97	
Dixon ‖	Mississippi	.40	T.						.04	.02	T.				.80				.25		.23	2.92	.04						.45	.02	.10	3.60	
Du Quoin	....do								T.											T.	1.15	.03	.40	.06					.38		.08		2.69
																						.25								.20	.02	.24	1.86

TABLE 2.—*Daily precipitation for May, 1911. District No. 5*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Illinois—Contd.																																	
Dwight	Illinois	.24							T.												.77	.69	.11	.12					1.00	.21	.25		2.79
East St. Louis‖	Mississippi	.86																				.94		.06						.35	T.	.40	2.61
Edwardsville	do	.11																				.27							.06	.10	T.	.44	0.98
Elgin	Illinois	T.	T.						T.						T.						.19	.52	T.						.11	.40	.02		1.24
Galva‖	do	.19	.07						.05	.08						.03					.51	.05	.22	.08					.03	.13	.17	.01	1.62
Grafton‖	Mississippi	.74																				.25								.08		.43	1.50
Greenville	do	.05																				.04							.32	.20		.25	0.86
Griggsville	Illinois	T.							T.												.58	T.	T.	T.							.18	.45	1.21
Havana	do	T.						T.	.46												.43	.34							.28				1.51
Henry	do																																
Hillsboro‖	Mississippi	.65	.15																			.15								.20		.35	1.50
Joliet	Illinois	.15	T.						.02	.21											1.49	.10	.70					T.	.86	T.		.12	3.65
Kishwaukee	Mississippi	.52	T.						.18						.75			.01			.05	.29	.31	.22					.13	.04		.05	2.55
La Grange	Illinois	.48								.09											.60	.15	.25	.05					.73	.09			2.44
La Harpe	do	T.							T.												T.	T.	.23						.97	.30		.03	1.53
Lanark	Mississippi	.50							.42	T.					.90			.02			.33	1.70	.40	.08					.09	.05		.09	4.58
La Salle	Illinois	.10							T.						T.					T.	.22		T.					1.60	.05			1.97
Lincoln	do	.02							T.												.80	.32		T.					.40	.20	T.	.05	1.79
Loami	do	T.							T.	T.											T.	.60	T.						.25		.50	.32	1.67
Martinton‖	do	.04																		T.	3.94	.18	.21						.91	.51		T.	5.79
Mascoutah	Mississippi																					1.27		.02					T.	.07	.01	.31	1.68
Minonk	Illinois	T.							.09												.70	T.	T.	.17					.29	.07	T.		1.32
Monmouth	Mississippi								.24	.05										14	.33	.08							.30	.33		.06	1.53
Morrison	do	.24							T.						1.11			.02			.27	.71	.05	.07					.12	.02		.06	2.67
Morrisonville	Illinois	.13	.01																T.		T.	.02		T.					T.	.18	T.	.33	0.67
Mount Vernon‖	Mississippi	.85											.05									.02								T.		.14	1.06
Oregon	do	.42													.60			T.			T.	.45		.20						T.			1.67
Ottawa	Illinois	.32																			.61	.69	.08						.83	.11			2.64
Pana	Mississippi	.19								T.										T.	.50							T.	T.	T.	.25	.18	1.12
Peoria	Illinois	T.							.06	T.											.11	.06	.02	.01				T.	.76	T.		.01	1.03
Pontiac	do	.13							.05	.04											.47	.15	.03	.11					.75	.53			2.26
Riley	Mississippi	.25							.19						.15						1.69		.11						.09	.03		.13	2.64
Rockford‖	do	.55	.01						.08	.17	T.					.54			T.		.01	.03	.71	.34					.03	.20	.13	.18	2.98
Rushville	Illinois								.18												.82		T.						.71			.06	1.77
St. Charles	do	.40	.02						.01	.10					T.			T.			.32	.35	.25	.01					.34	.22			2.02
St. Peter	Mississippi	.45										T.									T.	.25										.25	0.95
Sparta	do	.46		T.								T.									.20								.09	.33		.38	1.46
Springfield	Illinois	.01							T.	.01											.77	T.	T.					.06	.15		.03	.15	1.18
Streator ‖	do	.29	.26							.04												.60	.04	.09					.05	.86	.04	.06	2.33
Sullivan	Mississippi	.21								.19											.61	.60	.71							.80	T.	.09	3.21
Sycamore	do	.50	.05							.15						.16			T.		.30	1.05	.07	.02				T.	.18	.08			2.56
Tiskilwa	Illinois	.12													T.						.05	.75		.15					.38	.10			1.55
Walnut	Mississippi	.37							.03						.50						.04	.80	.12	.14				.46	.02	.12			2.60
Warsaw‖	do																			.15			T.					T.			.17		0.32
White Hall	Illinois	.04								T.												.20	T.						22		.13	.51	1.10
Windsor	Mississippi	.25								.63										T.	2.25	.43	.42						.05	.43	T.		4.46
Winnebago	do	.60							.17						.74			T.			.09	.40	.09	.14					.33	.04		.15	2.75
Yorkville	Illinois	T.							.20	.25											.85	.65	.35						.75	T.			3.05
Zion	Mississippi	.03							.05						1.59					.45	.51	.50	.08	.05					T.	T.		T.	3.26

* Precipitation included in that of the next measurement.
† Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 5, Upper Mississippi Valley.*

Date.	North Dakota.										Minnesota.															
	Bottineau.§§		Devils Lake.		Lisbon.		Minot.§§		Pembina.§§		Collegeville.		Crookston.§§		Grand Meadow.		Montevideo.§§		Moorhead.		New Ulm.§§		Pine River Dam.		St. Paul.		Winnibigoshish.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	45	16	43	20	.....	.....	47	15	46	18	49	28	42	21	44	26	54	27	48	25	53	32	47	21	49	30	47	26
2	55	17	51	19	.....	.....	55	13	55	16	51	28	50	21	50	28	57	23	54	21	55	28	52	27	52	29	51	26
3	64	24	61	25	.....	.....	66	26	64	18	58	28	58	27	59	29	66	23	62	23	62	27	57	26	60	34	58	30
4	67	32	69	37	.....	.....	69	38	74	28	67	38	69	32	64	30	78	28	72	25	69	30	66	21	65	37	68	26
5	85	40	77	43	.....	.....	86	42	78	38	72	44	74	40	70	34	76	40	75	37	76	35	72	26	71	40	69	38
6	81	44	75	46	.....	.....	88	50	80	44	72	49	77	48	72	39	79	48	79	48	78	40	74	41	74	46	72	47
7	69	36	69	47	.....	.....	71	48	74	54	72	48	71	53	76	49	67	54	72	48	77	42	69	47	75	53	68	50
8	81	38	80	43	.....	.....	84	42	85	38	78	43	80	38	81	52	83	35	83	34	84	44	78	30	78	42	76	34
9	75	42	78	47	.....	.....	83	49	79	42	80	56	76	50	87	50	94	48	84	54	93	46	77	48	80	57	70	49
10	47	40	54	36	.....	.....	51	40	54	50	89	58	57	53	89	60	92	56	63	42	91	62	68	47	88	51	69	45
11	40	32	36	33	.....	.....	48	38	50	32	85	42	49	35	79	42	64	43	42	33	66	42	64	36	61	45	64	35
12	69	26	60	32	.....	.....	75	27	58	27	64	34	55	31	62	35	69	32	60	32	68	38	60	34	62	35	57	32
13	84	35	77	48	.....	.....	74	38	78	34	79	47	78	42	78	37	84	45	84	44	86	38	80	30	80	44	76	33
14	77	50	69	51	.....	.....	75	49	68	47	88	57	80	52	77	56	92	60	89	61	89	55	86	68	81	58	76	52
15	59	43	57	47	.....	.....	55	47	58	48	84	60	66	54	80	61	76	59	68	55	82	63	78	50	72	59	76	53
16	66	50	76	52	.....	.....	70	49	70	52	85	49	80	54	83	65	90	60	84	52	91	63	71	48	86	66	69	47
17	86	46	88	52	.....	.....	85	47	88	48	87	69	89	53	90	64	96	55	92	52	92	66	88	68	90	66	89	46
18	75	50	75	51	.....	.....	74	55	76	54	89	59	82	60	90	67	97	56	86	58	86	68	90	74	90	70	88	68
19	69	39	69	47	.....	.....	70	44	73	53	88	59	75	54	82	56	74	57	76	53	78	58	82	59	75	61	82	60
20	53	39	51	42	.....	.....	61	38	53	44	75	54	55	50	77	58	74	55	60	47	68	50	79	45	79	54	73	47
21	70	30	65	38	.....	.....	72	35	68	34	67	49	67	40	59	50	63	46	70	39	65	43	68	43	64	54	72	45
22	76	41	68	41	.....	.....	74	40	72	43	72	49	63	52	54	47	68	32	62	51	75	53	60	50	74	54	67	50
23	74	44	70	44	.....	.....	74	47	74	45	73	50	70	53	70	49	80	54	72	48	75	50	70	48	68	52	63	50
24	76	52	82	51	.....	.....	73	53	78	48	79	55	83	51	80	51	86	55	84	52	85	53	79	42	79	55	79	41
25	59	40	66	46	.....	.....	62	44	69	46	85	61	69	52	89	61	85	56	72	54	93	60	82	48	85	65	84	51
26	46	42	50	40	.....	.....	44	42	46	46	89	68	84	51	89	62	95	60	93	55	95	68	91	55	90	68	84	57
27	49	35	52	38	.....	.....	49	37	53	42	86	53	60	45	82	49	71	52	62	45	68	63	85	55	79	57	74	57
28	62	30	63	33	.....	.....	65	32	62	34	66	45	64	38	61	46	70	43	65	38	65	49	66	54	63	52	65	43
29	65	33	68	46	.....	.....	67	46	72	48	72	49	73	43	72	44	76	52	74	39	78	49	72	36	71	50	72	37
30	71	48	67	51	.....	.....	76	50	59	52	74	53	60	53	77	50	82	55	63	51	80	58	66	54	74	54	69	48
31	83	48	83	49	.....	.....	85	53	81	46	77	52	80	45	79	55	86	50	82	46	76	53	77	53	78	55	78	49
Mns..	67.0	38.1	66.1	41.8	.....	.....	68.6	41.1	67.6	40.9	75.9	49.5	68.9	44.9	74.3	48.5	78.2	47.1	72.0	43.9	77.4	49.2	72.7	44.6	74.0	51.4	71.1	44.3

Date.	Wisconsin.														Iowa.											
	Delavan.		Eau Claire.		La Crosse.		Madison.		Mauston.		Spooner.		Wausau.		Algona.		Cedar Rapids.§§		Charles City.		Davenport.		Des Moines.		Dubuque.		Keokuk.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	48	33	49	31	43	30	40	32	52	35	50	23	47	28	47	30	43	39	46	30	63	36	50	34	48	35	68	40
2....	51	26	53	27	51	26	47	31	50	27	52	23	44	21	51	30	51	33	52	32	52	33	53	35	50	31	55	35
3....	59	31	60	28	58	31	54	36	60	34	58	25	53	25	60	32	60	35	59	31	60	37	60	39	58	34	60	37
4....	61	37	67	29	65	31	60	40	60	29	65	24	60	27	66	34	65	31	64	32	66	40	66	43	63	35	66	40
5....	70	35	75	32	71	35	67	42	70	29	71	38	69	29	71	38	70	37	69	35	69	45	69	42	69	42	69	44
6....	70	37	75	41	73	45	69	46	70	40	75	45	71	40	75	41	74	41	73	43	72	47	73	47	71	43	72	46
7....	76	42	77	53	80	53	75	48	76	40	77	42	78	38	80	52	80	47	76	48	77	54	76	53	78	54	77	51
8....	70	55	83	53	81	58	67	59	76	60	77	37	74	55	82	53	80	55	82	54	79	58	82	62	77	56	83	62
9....	83	46	84	46	84	53	81	54	86	50	82	50	80	48	89	59	90	57	88	55	88	58	88	65	86	55	87	68
10....	88	54	89	60	90	60	86	56	90	57	82	50	81	56	90	64	90	62	88	53	89	67	90	54	89	69	87	69
11....	76	55	86	47	73	50	72	51	80	50	78	45	81	38	72	44	75	50	72	46	76	53	74	47	76	52	83	55
12....	71	49	62	37	65	44	64	48	65	48	61	34	65	38	69	38	68	45	68	42	72	54	67	49	68	52	81	55
13....	68	35	78	37	78	42	70	42	70	40	75	42	68	35	80	48	81	47	77	44	81	47	80	52	76	47	83	54
14....	74	50	81	57	74	55	71	51	74	52	80	55	71	47	83	60	77	50	80	58	77	57	79	62	73	54	87	67
15....	83	60	75	62	81	64	78	64	84	64	74	53	74	60	83	68	89	60	82	64	87	66	83	66	86	67	89	69
16....	88	56	87	66	86	67	83	65	80	64	84	54	73	53	85	66	90	66	84	68	88	69	87	70	86	71	90	71
17....	88	63	91	62	88	70	83	67	84	67	87	51	87	63	89	62	85	71	88	66	89	70	88	70	82	67	90	72
18....	88	65	91	68	90	70	85	67	87	68	90	68	87	60	89	67	89	68	88	68	87	70	88	70	86	70	89	72
19....	90	68	86	62	85	61	87	63	85	68	80	59	86	67	83	57	89	72	83	57	89	64	85	60	87	62	87	75
20....	87	61	80	54	80	58	75	62	80	61	75	49	82	61	77	53	79	61	76	53	82	64	75	56	79	63	83	64
21....	76	60	73	55	66	57	68	60	76	55	77	49	77	54	66	53	80	61	65	58	80	65	72	56	78	64	78	65
22....	74	56	73	55	75	56	72	59	70	58	72	51	64	54	72	45	73	55	71	50	77	60	67	51	74	59	76	58
23....	69	56	70	55	72	54	68	56	68	48	64	47	69	53	76	46	73	52	72	50	72	55	75	48	70	56	77	53
24....	89	48	81	55	82	53	78	57	78	52	79	49	78	48	85	60	88	54	83	52	89	58	91	57	83	55	93	59
25....	92	69	87	63	91	67	88	61	88	60	87	63	84	54	90	61	95	60	91	64	93	67	93	69	91	68	94	67
26....	93	61	92	64	91	70	88	68	90	68	90	58	90	62	89	74	95	68	89	66	92	70	90	69	90	71	93	71
27....	92	66	87	62	87	58	87	66	87	68	80	55	88	68	81	57	92	69	83	57	92	69	85	60	89	64	91	70
28....	83	62	64	49	62	55	69	59	73	58	65	44	77	52	66	51	66	.....	62	53	74	61	60	51	71	58	83	65
29....	65	50	75	46	76	51	66	55	70	54	75	43	72	48	75	45	86	.....	72	50	69	57	68	54	69	58	76	59
30....	78	50	72	49	76	56	77	55	75	52	70	49	72	40	79	58	86	57	79	56	85	56	84	57	80	58	88	59
31....	76	58	75	55	72	57	71	60	72	55	74	51	72	50	79	56	75	57	76	57	78	62	78	64	74	60	81	67
Mns..	76.6	51.4	76.7	50.3	75.7	52.8	72.5	54.2	75.0	52.0	74.4	46.0	73.4	47.5	76.7	51.7	78.5	53.8	75.4	51.4	78.8	57.1	76.6	55.2	76.0	55.8	81.2	59.3

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois.															
					Cairo.		Greenville.		La Salle.		Monmouth.		Mount Vernon.§§		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	57	39	50	33	66	45	61	43	51	38	66	39	57	51	63	38	63	42	60	34
2	56	35	49	31	57	43	58	35	54	32	54	29	58	40	55	30	57	35	52	28
3	56	37	59	27	61	46	58	38	59	35	63	32	57	36	60	30	58	37	59	30
4	65	39	59	34	62	48	66	39	64	35	70	37	65	40	66	33	65	41	62	35
5	67	42	65	31	67	48	69	40	69	39	73	58	67	40	68	34	67	43	70	35
6	72	40	75	33	71	49	74	49	72	41	74	40	71	42	72	39	72	44	73	46
7	77	51	80	48	76	51	78	50	78	51	80	40	79	43	78	42	77	48	78	45
8	84	60	81	47	81	54	82	52	81	58	83	53	81	45	83	55	83	55	74	54
9	87	66	80	55	85	60	87	62	88	56	90	53	89	59	88	60	89	62	86	48
10	87	66	87	57	83	62	84	60	87	61	89	62	86	57	88	62	86	62	87	55
11	75	57	78	64	83	65	75	65	76	58	78	53	84	60	74	56	76	61	76	52
12	82	54	76	48	81	65	84	56	75	50	82	52	83	59	80	51	83	56	70	46
13	83	57	73	36	84	65	85	57	79	43	86	48	86	55	84	49	84	53	75	38
14	88	69	79	48	85	63	86	60	86	57	88	64	85	69	86	61	87	62	77	55
15	90	68	89	49	86	64	88	57	89	60	93	60	89	58	89	63	89	61	85	60
16	88	68	90	58	86	67	87	65	90	66	93	65	90	61	90	64	90	64	88	65
17	90	71	91	58	89	68	88	65	91	67	93	67	91	63	91	67	91	68	86	66
18	89	71	91	60	91	71	89	67	92	68	90	67	93	62	92	69	91	69	86	65
19	88	70	91	62	87	72	88	68	90	69	90	68	89	66	89	70	90	69	89	70
20	80	63	87	68	79	69	87	65	81	64	85	63	84	68	82	65	88	65	83	60
21	74	60	85	63	81	67	78	63	80	65	83	63	82	66	80	64	81	65	80	62
22	76	57	80	61	83	67	79	62	78	62	80	56	84	64	79	59	80	63	78	60
23	78	50	75	43	87	64	78	58	72	57	77	56	83	58	76	55	79	58	70	52
24	93	53	80	44	92	64	88	59	87	53	93	53	93	53	90	51	92	56	84	50
25	93	66	94	52	93	68	91	64	95	63	96	62	97	60	93	63	94	65	91	60
26	93	69	94	62	95	71	93	66	94	65	96	67	98	61	95	65	95	68	93	64
27	91	72	96	60	94	70	93	67	93	70	95	65	99	60	94	68	94	68	91	66
28	89	66	91	62	96	71	96	68	84	64	85	63	97	63	91	64	93	67	79	62
29	81	60	80	50	93	72	87	65	71	57	70	58	96	72	75	61	84	64	68	54
30	88	64	76	56	94	73	86	66	82	57	88	54	96	68	85	60	85	61	83	56
31	81	63	74	59	89	69	83	64	81	63	84	61	89	64	83	59	86	67	72	62
Means	80.6	58.2	79.2	50.6	82.5	62.3	81.5	57.9	79.6	55.6	82.8	54.5	83.8	56.9	81.3	55.1	82.2	58.0	77.6	52.7

"$_a$," "$_b$," "$_e$," etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT NO. 6, MISSOURI VALLEY.

MONTROSE W. HAYES, District Editor.

GENERAL SUMMARY.

In parts of Montana and Wyoming, and in a few localities in the lower portion of the district, there was a fair amount of rainfall and the temperatures were quite moderate. In by far the greater portion of the drainage area, however, the month was unseasonably warm and dry, and several days of unusually high temperatures, bright sunshine, and low humidity intensified the effects of the deficient precipitation. The coolest weather was during the early days of the month, and there was frost throughout the district, but there appears to have been no damage from either frost or freezing temperatures, except in the northern part of South Dakota, and in the Black Hills of the same State, where fruit suffered to a limited extent. At the close of the month the need of rain was general in the country to the east of the foothills of the Rocky Mountains; this need was most marked in South Dakota, Nebraska, Kansas, and Missouri. In Colorado there was a shortage of water for irrigation, on account of the slow melting of snow in the higher mountains. Early in the month strong winds caused some local damage in South Dakota by blowing seed out of sandy soil.

On May 18, about 6 p. m., storms of a tornadic character occurred in Brookings, Moody, and Minnehaha Counties, in east-central South Dakota, on the Minnesota line. There was considerable damage to crops and buildings by wind and hail; several persons were injured, but none was killed, so far as known. With this exception the month was unusually free from severe storms.

TEMPERATURE.

On the 2d an area of high atmospheric pressure covered the lower portion of the district, having moved across the entire drainage area within 48 hours. It was accompanied by the coldest weather of the month, and temperatures below the freezing point were general as far south and east as Omaha, while in the country lying to the southward and eastward of Omaha the lowest readings at most stations closely approximated the freezing point. The temperature began to rise on the 3d, and by the 5th was above the normal in almost all the district. During the remainder of the month it continued higher than the seasonal average, except in Montana and parts of Wyoming and western North Dakota. The warmest day in Montana was the 5th, and in Wyoming it was the 31st. At the various stations in the remainder of the district the maximum temperature for the month occurred on dates varying between the 9th and the 28th. At several of the stations in the lower part of the district, or below Omaha, new records for high temperatures in May were established. The mean daily temperature excess for the month was greatest along the Missouri River below Kansas City, and in the eastern part of South Dakota, where it amounted to from 4° to 5°. In the other parts of the drainage area lying to the east of the foothills there was a general, but less marked excess, and in the foothills and Rocky Mountain country numerous localities had a deficiency.

PRECIPITATION.

In Missouri most of the rain fell after the 18th. To the westward and northward of Missouri there was a fair distribution of showers through the month. In parts of Montana, and in northwestern North Dakota and northwestern Wyoming the total precipitation for the month was somewhat above the normal. Also at a few widely separated localities in the lower part of the district local falls of rain were heavy enough to make the entire amount of the month greater than the seasonal average. In most of the drainage area, however, there was a marked deficiency, which was most pronounced over the watersheds of the Osage and the Gasconade Rivers, and along the Missouri River from Kansas City eastward to the mouth. The greatest amount of precipitation for the entire month was 11.75 inches at Halfmoon Pass, Mont., and the greatest amount in 24 consecutive hours was 4.10 inches at Fullerton, Nebr., on the 14th. During the early days of the month there was some snow as far eastward and southward as the confluence of the Kansas and the Missouri Rivers. The fall was moderately heavy in some of the mountain country, but in the lower territory it was light and very scattered. The greatest amount for the month was 35.5 inches at Woodrock, Wyo.

RIVERS.

In Montana most of the streams were high for the season, and there was a flood stage in the Yellowstone River for several days. In no other portion of the drainage area were the stages as high as the normal; in fact, they were unusually low. At the end of the month the discharge of the Belle Fourche River, which feeds the Government reservoir of the same name in South Dakota, was 19 second-feet, the lowest discharge ever recorded. There was very little fluctuation in the Missouri River. At Hermann, Mo., 103 miles from the mouth of the river, there was a gradual decrease in the height of the water throughout the month. Daily readings of the stages of the Missouri were begun at Omaha, Nebr., in 1872, and at Hermann, Mo., in 1873. The average stage at Hermann was lower during the month just passed than in any other May covered by the records. It was unusually low at Omaha also, but in May, 1872, there was a lower mean stage. It does not necessarily follow that the river at Hermann was lower in May, 1872, than in the same month in 1911, for in 1872 the rains may have been heavier below than they were above Omaha; but as a rule proportional stages prevail to the south of Sioux City, and it is a fair assumption that the river from Sioux City or Omaha to the mouth was lower in May, 1872, than in May of this year. At St. Louis the mean stage of the Mississippi was lower than for any other May covered by the records, which extend back to and include 1861, and was a result of the coincident very low stages of both the Missouri and the Mississippi, above the mouth of the Missouri, a condition that does not exist often.

TABLE 1.—*Climatological data for May, 1911. District No. 6, Missouri Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Wyoming.																			
Arapahoe	Fremont		2																A. E. Deitz.
Barnum	Johnson	5,500	6								2.04		0.90	0	6	14	10	7	w.	Thos. Freeguard.
Basin	Bighorn	3,862	12	56.5	0.0	89	5†	30	12†	47	1.44	+ 0.23	0.62	0	4	18	9	4	nw.	O. J. Robertson.
Bennett	Carbon		2								0.53		0.21	0	5	20	10	1	w.	Chas. C. Young.
Big Creek	do	7,500		47.8		75	31	18	11	43[a]	0.88		0.28	0	7	7[a]	17[a]	6[a]	sw.	U. S. Forest Service.
Casper	Natrona	5,101	2	55.8		97	30	29	1†	65	2.06		0.94	0	5	10	14	7	sw.	M. C. Cook.
Centennial	Albany	8,074	8	47.4		75	31	22	11	41	0.55		0.16	3.1	10	7	5	19	w.	Louis A. Gregory.
Cheyenne	Laramie	6,088	40	52.2	+ 1.2	79	25	25	1	42	0.33	− 2.10	0.13	T.	11	9	15	7	s.	U. S. Weather Bureau.
Chugwater	do	5,282	10	53.3	+ 2.7	83	25	20	2	50	0.06	− 2.52	0.02	0	3	14	14	3	ne.	A. H. Woolever.
Clark	Park	4,320	5	55.2		87	5	33	27	37	1.54		0.76	0	7	13	9	9	n.	Chas. A. C. Snow.
Cody	do	5,000	4	54.7		87	31	30	11	48	T.		T.	T.	0	4	13	14	w.	C. W. Dibble.
Crazy Creek	do	6,828		41.3		73	5†	11	7	52	2.02		0.70	0.1	12	10	8	13	w.	Jas. Smith.
Dome Lake	Sheridan	8,821	3	38.4		67	31	16	1†	36	3.14		1.50	16.5	10	12	17	2	sw.	Abe Mills.
Douglas	Converse	4,793	2	53.1		84	31	29	26	44	2.16		0.88	0	9					Henry C. Miller.
Dubois	Fremont	6,909	4	45.0		74	31	19	12	49	2.09		0.88	0	9	13	15	3	w.	Dr. F. H. Welty.
Eatons Ranch	Sheridan	4,600	6	52.6		92	31	23	1	50[a]	2.78		0.87	0	7	16[a]	13[a]	1[a]	w.	F. A. Eaton.
Echeta	Crook	4,200	2								1.71		0.60	0	5	20	9	2	s.	M. R. Hunter.
Elk Mountain	Carbon		6								1.19		0.30	19.5	7					Wm. Richardson.
Encampment	do	7,322	2	49.8[b]		79	14	21	1	42[b]	0.32		0.16	0	3	7[b]	18[b]	4[b]	sw.	U. S. Forest Service.
Ervay	Natrona	6,400	2	49.5		80	31	24	27	46	1.77		0.76	0	7	11	11	9	sw.	Frank Jameson.
Fort Laramie	Laramie	4,270	33	55.1	− 0.4	89	9†	26	1†	46	0.53	− 1.83	0.25	0	4	13	17	1	w.	John Hunton.
Fox Park	Albany	9,015	1	37.9		65	25	10	1	42	0.40		0.40	4.0	1					U. S. Forest Service.
Germania	Bighorn			54.0[f]		84	31	31	11†	41[f]	1.04		0.58	T.	5	11[f]	11[f]	3[f]	nw.	L. E. Watson.
Gillette	Crook	4,546	5	53.9		87	31	27	27	34	0.91		0.35	0	6	12	11	8		S. D. Perry.
Horse Creek	Fremont			40.8		88	31	12	28	44	3.42		0.92	27.0	12	7	17	7	w.	Walter J. Hill.
Hunters Station	Johnson	8,000	5	42.2		73	31	18	1†	43	2.65		1.21	6.0	14	14	8	9	w.	U. S. Forest Service.
Hyattville	Bighorn	4,632	12	56.0	+ 1.3	88	31	30	27	43	0.15		0.05	0	4	10	13	8	w.	Wm. Booth.
Jireh	Converse	5,050	1								1.30		0.39	2.0	8	8	18	5	se.	P. L. Ford.
Kirtley	do		7	53.4		83	23	20	1	41	1.07		0.30	0	7	18	5	8	s.	D. M. ZumBrunnen.
Knowles	Crook	4,500	2								1.40		0.50	0	6					Geo. A. Knowles.
Lagrange	Laramie	4,510	1								1.06		0.48	0	10	18	8	5	w.	Owen Shupp.
Lander	Fremont	5,372	19	51.9	− 0.2	82	5	27	19	47	0.93	− 1.97	0.41	1.1	8	14	16	1	sw.	U. S. Weather Bureau.
Laramie	Albany	7,188	20	48.9	+ 2.4	75	5†	21	1	41	0.30	− 1.29	0.08	0	6	26	4	1	sw.	University of Wyoming.
Leo	do	6,878	10	47.8	+ 1.2	74	31	25	27	36	0.78	− 1.03	0.43	4.2	4	13	16	2	sw.	C. A. Cowdin.
Lolabama Ranch	Park	7,052	7	43.6		71	8	21	26†	49				2.0		12	18	1	w.	Mary E. Painter.
Lovell	Bighorn	3,825	6	55.8		88	5	27	11	47	1.14		0.65	0	3	10	16	5	s.	R. Fred Harrison.
Lusk	Converse	5,007	21	52.2	+ 0.5	83	23†	28	26	48	1.52	− 1.27	0.80	0	3					D. E. Goddard.
Manville	do	5,050	1								1.32		0.50	2.0	9	11	17	3	se.	C. A. Sherman.
Moore	Albany	6,000	10	51.4	+ 2.1	82	25	22	1	48[a]	0.14	− 2.28	0.08	0	3	3	16	11	w.	Edwin Moore.
Newcastle	Weston	4,319	4	56.6		88	17†	26	2	48	0.65		0.21	T.	4	11	18	2	n.	Dr. S. W. Johnson.
Pathfinder	Natrona	5,735	5	53.6		82	31	30	1†	45	1.25		0.85	2.0	7	12	13	6	sw.	U. S. Reclamation Service.
Phillips	Laramie	4,900	8	57.5		83	8	29	1	39	T.		T.	T.	0	19	6	6	nw.	Mrs. Arthur Rugg.
Pine Bluff	do	5,038	9								1.42		0.33	0	7					C. L. Beatty.
Powell	Park	4,736	4	54.2		88	5	31	11	47	0.80		0.36	0.5	4	11	16	4	nw.	U. S. Reclamation Service.
Rawlins	Carbon	6,748	10	52.0	+ 1.7	83	31	27	11†	42	0.74	− 1.00	0.34	5.0	6	15	14	2	sw.	E. J. Ehrenfeld.
Saratoga	do	6,785	13	50.4	+ 0.3	80	31	22	28	46	0.28	− 1.45	0.10	4.0	5	6	24	1	w.	G. Frederick Clark.
Sheridan	Sheridan	3,790	16	52.4	+ 2.4	86	31	28	7	49	1.22	− 2.19	0.47	T.	12	9	8	14	nw.	U. S. Weather Bureau.
Shoshone Dam	Park	5,385	5	52.7		85	5	28	26	48	0.63		0.28	T.	6	12	18	1	w.	U. S. Reclamation Service.
Soldiers Home	Johnson	4,635	19								2.42	− 0.24	0.61		6	9	8	14	sw.	Geo. L. Courtney.
South Pass City	Fremont	7,873	9	43.0		72	31	18	7†	45	1.22		0.45	2.0	7	8	14	9	sw.	John Sherlock.
Thermopolis	do	4,350	7	55.6		89	31	31	7†	50	1.38		0.57	T.	8	15	15	1	sw.	A. L. Duhig.
Upton	Weston		2																	G. E. McPherren.
Valley	Park	6,500	2								1.78		0.82	0	6	12[a]	13[a]	5[a]	w.	Jas. L. McLaughlin.
Verona	Sheridan	4,360	2								2.22		0.53	0	10	6	22	3	se.	O. A. Roode.
Wiants Ranch	Carbon	7,400	1								0.93		0.41	4.0	7	7	20	4	sw.	Ira G. Wiant.
Woodrock	Sheridan										4.74		1.30	35.5	14	14	10	7	w.	U. S. Forest Service.
Worland	Bighorn			59.6		88	5†	32	26	46	1.16		0.53	0.8	6	14	13	4	nw.	Harry S. Smith.
Wyncote	Laramie	4,207	4	55.3		86	8	24	1	48	0.84		0.21	2.0	7	14	15	2	e.	U. S. Reclamation Service.
Yellowstone Park	Yellowstone National Park.	6,200	23	44.2	− 3.2	77	31	24	27	43	2.19	+ 0.28	0.48	8.2	12	5	17	9	sw.	U. S. Weather Bureau.
(1) Fountain	do	7,220	5	40.8		74	31	14	27	46	2.48		1.00	13.0	10	25	0	6	se.	U. S. Army.
(2) Gallatin	do										0.75		0.20	7.5	7	7	11	13	n.	Do.
(3) Grand Canyon	do	7,900	4	38.0		70	31	15	27†	43	2.19		0.63	19.9	11	16	4	11	nw.	Do.
(4) Lake Yellowstone	do	7,733	7	35.6		67	31	11	19	41	1.46		0.55	16.0	5	25	0	6	s.	Do.
(5) Norris	do	7,525	7	39.8		71	31	16	27	45	2.92		1.00	18.7	11	15	7	9	w	Do.
(6) Riverside	do	6,500	5	42.2		76	31	17	27	49	0.12		0.07		3	18	0	13	sw.	Do.
(7) Fairview Dome	do	7,000	6	43.2		75	31	19	7	48	1.55		0.08	2.0	6	2	2	27	sw.	Do.
(8) Sylvan Pass	do	7,000	4	43.0		77	31	20	7	49	3.82		0.85	5.5	11	16	3	12	w.	Do.
(9) Thumb	do	7,772	5	37.9		71	31	6	7	49	1.33		0.65	15.0	3	12	0	19	sw.	Do.
(10) Tower Falls	do	6,250	2	45.0		83	7	18	9†	45	0.13		0.05		4	15	0	16	nw.	Do.
(11) Upper Geyser Basin.	do	7,395	7	40.8		72	31	18	27	44	2.35		0.70	T.	8	18	5	8	s.	Do.
Montana.																				
Adel	Cascade	5,200	13	45.3	− 1.2	81	5	21	27	41	4.22	+ 0.71	0.95		15	11	11	9	w.	Mrs. B. F. Burch.
Agricultural College	Gallatin	4,700	14																	Prof. E. Burke.
Augusta	Lewis and Clark	4,071	13	47.0	− 2.5	85	5	18	1	55	2.99	− 0.01	2.00		6	21	3	7	w.	C. C. Covington.
Babb	Teton	4,461	5	45.7		79	5†	21	1	48	3.44		0.84	11.6	12	7	15	9	sw.	U. S. Reclamation Service.
Bald Butte	Lewis and Clark	6,500	2								2.69		1.18	12.9	10	6	15	10		W. W. Alderson.
Bigtimber	Sweet Grass	4,072	5	51.8		85	5	25	1	47	4.01		1.10		7	20	5	6	w.	F. A. Severance.
Bigtimber Creek	do		2								5.44		1.37	10.7	12	6	15	10	w.	J. T. Mjolsness.
Billings	Yellowstone	3,115	16	54.4	− 1.0	92	5	29	1	54	3.24	+ 0.21	1.52		12				w.	U. S. Weather Bureau.
Blackleaf	Teton	4,260	4	45.2		80	5	18	27	39	5.10		2.40		10	8	16	7	w.	Adolph Aman.
Bloomfield	Dawson		3	52.0		88	5	16	1	60	3.58		1.70		7	10	15	6	nw.	E. B. Chaney.
Boulder Nursery	Jefferson	4,920	17	44.1[d]	− 4.4	82	5	20	1	50[d]	2.47	+ 0.66	0.61		14	4[d]	15[d]	8[d]		U. S. Forest Service.
Bowen	Beaverhead	6,000	5	41.2		73	31	11	1	42	1.34		0.50		9	11	7	13		B. B. Lawrence.
Bridger	Carbon	3,664	3	54.0		90	5	27	2	47	1.81		1.31	0	5	6[a]	11[a]	13[a]	s.	L. E. Gard.
Broadview	Yellowstone		5	52.6		89	5	25	1†	46	2.65		1.00	5.0	9	18	12	1	w.	Mabel Sudduth.
Busby	Rosebud		8	53.5		89	5	18	1	54	2.14		0.58	2.0	10	8	14	9	nw.	Rev. G. A. Linscheid.
Busteed	Sweet Grass		4	50.6		86	5	19	1	53	3.26		1.07	3.5	12	14	13	4	nw.	T. H. Busteed.
Cabin Creek	Beaverhead		2								1.71		0.65	0.2	9	11	11	9	se.	W. J. Crowell.
Canyon Ferry	Lewis and Clark	3,644	13	51.0	− 2.5	86	5	27	1	44	1.74	− 1.05	0.40		11	12	12	7	nw.	A. C. Pratt.
Cascade	Cascade	3,361	7	50.8		88	5	23	1	51	2.40		0.67	T.	11	17	8	6	sw.	Dr. E. E. James.
Chessman Reservoir	Lewis and Clark	5,275	3	40.5		73	5	17	1	38	3.44		0.88	19.1	14	14	7	10	sw.	C. D. Schmidt.
Chester	Chouteau	3,140	7	50.8		91	5	29	1†	50	1.78		0.52	0	8	11[a]	12[a]	7[a]	n.	E. D. Keith.
Chinook	do	2,502	13	53.2[i]	− 1.3	87	8	27	2	55[a]	2.20	− 0.26	0.70		9				w.	T. O'Hanlon Co.

TABLE 1.—*Climatological data for May, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana—Contd.																				
Chouteau	Teton	3,810	7																	T. J. Moore.
Clearcreek	Chouteau		6	51.8[d]		88	5	32	1†	40	2.48		0.91		7	11[d]	9	7[d]	w.	Cortez Sedgewick.
Clemons	Lewis and Clark	4,672	2								3.30		1.75	8.0	8	5	13	11	w.	Frank Eberl.
Clydepark	Park		1								3.57		0.94	3.0	11	6	11	14		Dr. T. B. Marquis.
Conrad	Teton			48.8		88[a]	5	22	1	47[a]	2.33		0.85		10	14	9	8	sw.	I. S. Martine.
Copper	Meagher		6								3.18		0.77	8.0	13	9	11	11	w.	Orville Harris.
Crow Agency	Rosebud	3,041	30																	H. R. Bamber.
Culbertson	Valley	1,927	8	56.0		90	31	24[a]	12	51[a]	3.88		1.65	T.	7	11	13	9	nw.	G. H. Coulter.
Cummings	Carbon		1	46.4[d]		77	5†	20	1	53[d]	2.16		0.64	4.5	6	19		4		J. W. Brimmer.
Cut Bank	Teton	3,700	12	48.6	− 0.6	85	5	24	1	51	3.47	+ 0.53	1.36	0	11	15		8	w.	C. N. Thomas.
Denton	Fergus	3,500	3	50.4		86	5	28	1	37	2.58		0.70	6.8	9	7	14	9	nw.	P. J. Griesenauer.
Dillon	Beaverhead	5,147	14	50.4	− 1.0	78	31	24	27	45	3.26	− 0.08	0.71	T.	14	4	13	14	sw.	Prof. J. E. Monroe.
Dirty Creek	Meagher	6,000	2								4.08		1.11	0.3	14	12	5	6	w.	Lewis Cameron.
Dry Creek	Broadwater	5,500	2								2.56		0.58	3.8	15	4	12	5	w.	J. C. Stuart.
Dry Wolf Camp	Cascade	6,000	2								3.28		1.25	10.5	15	10	6	10	sw.	Mrs. R. J. Eveleth.
East Gallatin River	Gallatin	6,000	3								3.79		0.94	6.5	12	11	8	9	w.	John Eberhart.
Ekalaka	Custer		11	55.6	+ 2.7	89	31	20	1	51	1.25	− 1.01	0.65		8	18	3	11	e.	Wm. Freese.
Elkhorn	Jefferson	6,576	3								2.84		0.78	5.5	19	6	5	11	w.	James Heagan.
Evans	Cascade	4,900	4																	H. Thrasher.
Fallon	Custer	2,208	7	56.5		91	5†	18	1	54	3.69		1.90	0	8	10	17	4	nw.	Mrs. A. C. Gifford.
Fish Creek	Silver Bow	8,500	2	38.6		62	5†	16	27	32	3.93		1.60	21.0	10	9	14	11	w.	O. B. Tilton.
Flathead Creek	Gallatin	6,000	2	47.3[b]		80	5	21	1†	53[j]	3.46					8	12	11	sw.	Alta Williams.
Forsyth	Rosebud	2,514	6	58.0		92	5	19	1	48	1.60		0.70	T.	5	19	9	12	n.	W. Wakefield.
Fort Benton	Chouteau	2,630	32	53.2	− 1.8	89	7	34	1†	38	2.06	− 0.60	0.46	0	7	16	8	7	sw.	Jere Sullivan.
Fort Shaw	Cascade	3,500	23	51.5	− 2.5	95	31	22	1	53	1.57	− 0.49	0.68		5	15	7	9	sw.	U. S. Reclamation Service.
Fort W. H. Harrison	Lewis and Clark	4,004	8	52.0		89	5	32	7	49						17	9	5	w.	Post Hospital.
Foster	Yellowstone		2	54.5		92	5	21	1	53	1.76		0.62		7	11	13	7	nw.	E. K. Bowman.
Garneill	Fergus	5,500	3	42.5		68	13	28	10†	30	8.90		1.10	7.0	15	0	14	17	nw.	T. S. Scally.
Glasgow	Valley	2,092	15	53.0	− 3.0	90	6	26	1	44	2.09	− 0.33	0.88	3.7	7	18	3	10	w.	W. W. Mabee.
Glendive	Dawson	2,069	21	58.2	+ 2.0	88	5†	26	1	48	4.35	+ 1.80	2.00	0	10	9	16	6	n.	E. C. Leonard.
Goldbutte	Chouteau		4	50.6		90	5	25	7	43	1.70		0.46		12	4	15	12	n.	J. Berthelote.
Graham	Custer		6	55.4[b]		87	8	25	1†	49[b]	1.03			0		14[a]	8[a]	2[a]		J. S. Rue.
Grayling	Gallatin	6,700	6	42.2		72	31	19	11	44	2.65		0.43	1.0	11	3	16	12	sw.	P. Kerzenmacher.
Great Falls	Cascade	3,350	20	51.4	− 2.2	88	5	30	1	42	2.83	+ 0.22	0.64	0	15	6	16	9	sw.	S. H. Bauman.
Halfmoon Pass	Fergus	6,500	2								11.75		2.00	27.0	17	2	22	7	w.	Thos. Stigen.
Halfway House	Broadwater	6,000	2								2.97		0.63		14	9	11	11	sw.	Gordon Deans.
Harlowton	Meagher	4,165	4	48.6[f]		87	5	16	1	52[f]	4.13		1.34		7	5[b]	10[b]	8[b]	w.	Joseph Muir.
Havre	Chouteau	2,505	32	53.6	− 0.5	91	5	31	1	40	1.45	− 0.64	0.75	0	6	7	15	9	w.	U. S. Weather Bureau.
Helena	Lewis and Clark	4,110	32	49.6	− 2.0	85	5	30	1	39	2.07	+ 0.12	0.70	5.2	14	6	14	11	w.	Do.
Highwood	Chouteau		5								3.65		1.35	3.0	12	11	8	12	sw.	W. S. McCord.
Huntley	Yellowstone	3,014	5	56.0		91	5	25	1	49	3.60		1.96		10	13	16	2	e.	U. S. Reclamation Service.
Jones Canyon	Gallatin	6,800	2								6.68		1.46	18.0	12	5	16	10	w.	Jas. McCune.
Jordan	Dawson		6																	W. C. Henderson.
Knobles Ranch	Chouteau										2.38		0.80	7.0	12	14	5	12	w.	F. H. Knoble.
Lewistown	Fergus	4,010	15	49.1	− 1.3	84	5	25	7	44	5.18	+ 1.94	0.82	6.0	16	9	12	10	nw.	W. W. Watson.
Livingston	Park	4,488	15																	W. A. Jennings.
Lonetree	Chouteau	3,280	6	52.7		89	5	25	1	37	3.42		0.90	0	13	16	8	7	w.	E. Wilson.
Malta	Valley	2,240	5	53.6		90	5	28	1	42	3.09		0.71	T.	11	11	16	4	w.	U. S. Reclamation Service.
Medicine Lake	do		1	52.7		88	5	17	2	56	2.60		1.31		8	10	18	3	nw.	J. S. Collier.
Melstone	Fergus	2,903	2								4.18		1.25		9					E. J. Parkinson.
Mildred	Custer		2								3.43		1.13	0	9	9	21	1	se.	Leon B. Clark.
Miles City	do	2,371	20	58.4	+ 1.7	90	5	24	1	43	0.74	− 1.24	0.29	0	6	13	11	7	ne.	U. S. Weather Bureau.
Norris	Madison	4,845	5	50.3		82	5	30	1	37	4.20		1.60	8.0	12	8	13	10	s.	Madison River Power Co.
Nye	Sweet Grass		3								2.76			8.0						F. L. Bryant.
Olsen Creek	Jefferson	6,345	3								2.20		0.60	1.5	12	9[a]	12[a]	9[a]	w.	R. Olsen.
Pipestone Pass	do	7,000	3								2.80		0.54	7.0	12	8	14	9	w.	Mrs. T. Kiermeyer.
Poplar	Valley	2,020	26	55.6	+ 1.2	92	5	28	12	52	2.37	+ 0.47	1.25	12.5	7	18	8	5	nw.	H. M. Cosier.
Red Lodge	Carbon	5,548	12	46.8	+ 0.7	81	5	23	11†	40	4.35	− 0.55	1.87	6.0	8	8	13	10	se.	I. A. Draper.
Renova	Jefferson	4,383	13	49.9	− 1.3	85	5	22	1	52	1.74	− 0.60	0.51	T.	10	14	8	9	sw.	F. B. Elmer.
Ryegate	Yellowstone	3,640	2	52.4		88	5	25	1	49	4.85		1.55	0	10	24	0	7	w.	H. Scherfenberg.
Seville	Teton	3,980	3	46.4		85	5	22	2	42	2.62		1.14	2.0	9	14	5	12	w.	U. S. Reclamation Service.
Sidney	Dawson		1	55.4		85	5	22	1	51	3.13		1.94	0	8	11	10	10	w.	Fred W. Arndt.
Spokane Ranch	Lewis and Clark										1.62		0.58		11					O. E. Penwell.
Springbrook	Dawson		10	56.4	+ 4.2	90	5	23	1	44	2.31	− 0.35	1.46	1.3	7	10	10	11	se.	Mrs. H. L. Miller.
Stearns	Lewis and Clark	4,500	2								3.14		1.65		4	12	4	15		J. W. Hardgrove.
Three Forks	Gallatin	4,066	1	52.0[e]		89	31	25	8	58[e]	1.89		0.60	0	10				sw.	M. S. Carpenter.
Tokna §	Dawson	2,050	6																	U. S. Reclamation Service.
Trail Creek	Park	6,000	3								3.97		0.74	12.0	12	18	5	8	w.	A. Weidenbauer.
Twete	Chouteau										2.23		0.60	0	9	15	5	11	w.	C. R. Noyes.
Utica	Fergus	5,000	17	47.9	+ 0.2	83	5	28	2	44	4.05	+ 1.32	1.37		14	15	14	2	w.	P. W. Korell.
Valentine	do		5	53.0		88	5	24	1	45	4.51		1.87		8	17	8	6	w.	B. M. Bean.
Virginia City	Madison	5,880	23	47.1	− 0.5	77	5	22	10	39	2.17	− 0.63	0.59		10	7	16	8	w.	M. Mailand.
Wall Rock Mountain	Broadwater	5,600	2								3.40		0.72	0	12	7	16	8	nw.	D. L. Doig.
Warm Springs Creek	Madison	7,500	2																	M. D. Lytle.
Wilder	Fergus	2,900									4.41		1.38		10	13	6	12	w.	J. O. Rogers.
Wolf Creek	Lewis and Clark	4,000	8	52.0		91	6	28	1	49	2.57		0.56		15	4	26	1	sw.	A. J. Reed.
Woodville	Jefferson	6,376	2								1.31		0.32		12	5	21	5	sw.	Anna Kinman.
North Dakota.																				
Aplin	Oliver		5	55.6		89	6	10	1	54	1.00		0.32	0	8	14	13	4	nw.	J. B. Hagelbarger.
Beach	Billings	2,759	5	54.9		87	7	20	1	51	2.86		1.18	0	9	17	12	2	n.	D. J. Steiner.
Belfield	Stark	2,583									2.71		1.23	0	10					W. F. Gobius.
Berthold Agency	McLean	2,082	15	55.5	+ 5.0	88	8	8	2	56	1.69	− 0.92	0.85	0	8	12	12	7	nw.	C. L. Hall.
Bismarck	Burleigh	1,674	37	56.8	+ 1.6	92	17	18	1	42	1.18	− 1.32	0.57	0	10	13	12	6	nw.	U. S. Weather Bureau.
Broncho	Mercer		4	50.2		85	24	10	13	70	1.67		0.73	0	4	1	25	5	nw.	E. M. Walker.
Buford	Williams	1,944	6	54.9		87	5	22	2	52	2.64		1.21	0	11	16	0	15	e.	J. A. Beisel.
Dickinson	Stark	2,453	19	54.2	+ 1.4	86	8†	15	1	52	1.63	− 0.74	0.54	T.	10	15	7	9	nw.	L. R. Waldron.
Edgeley	Lamoure	1,468	10	57.2	+ 3.6	90	17	17	2	46	2.31	− 0.47	0.98	0	8	3	23	5	nw.	O. A. Thompson.
Epping	Williams		4								3.58		1.40	0	8	16	9	6	w.	M. A. Uggen.
Fullerton	Dickey	1,439	13	57.8	+ 4.4	92	26	20	2	49	3.69	+ 0.40	0.85	0	10	19	7	5	nw.	F. O. Allin.
Garrison	McLean		2	54.8		89	14	13	1†	44	1.36		0.40	0	6	11	11	9	se.	G. L. Robinson.
Haley	Bowman		4	54.6		91	14	10	1	57	1.43		0.55	T.	6	18	8	5	nw.	A. M. Oberchain.
Hettinger	Adams	2,253	5	55.9		90	6†	12	1	54	0.43		0.39	0	2	12	15	4	se.	W. R. Lanxon.
Howard	Divide	2,275	5	53.4		89	5	12	2	58	3.75		1.50	1.5	6	10	12	9	se.	C. P. Amsbaugh.
Jamestown	Stutsman	1,390	24	54.5	+ 0.3	80	17	18	3	51	3.92	+ 1.03	1.10	0	8	15	0	16	sw.	Thos. Pettigrew.

TABLE 1.—*Climatological data for May, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota—Contd.																				
Lamoine	Kidder		4																	E. V. Virgin.
McHenry	Foster	1,509	2																	John Knox.
Manfred	Wells	1,605	10	55.2		89	17	13	1	68	2.20		0.43	0	9	18	2	11	se.	P. B. Anderson.
Marmarth	Bowman		4								2.36		1.28	T.	9	9	10	12	se.	S. P. Grane.
Marstonmoor	Stutsman		4	48.4		83	17	8	2	41[e]	2.76		0.80	0	6	12	14	5	se.	H. H. McCumber.
Medora	Billings	2,225	15	51.0	− 4.2	86	7†	22	2†	54	3.05	+ 0.89	2.35	T.	4	16	3	12	ne.	J. W. Hesser.
Melville	Foster	1,509	14	58.9[c]	+ 5.8	91	17	17	1†	46[c]	4.96	+ 2.76	1.38	0	7				sw.	J. P. Kidder.
Mott	Hettinger		5	55.6		89	6†	16	1	57	0.52		0.23	0	7	11	7	13	nw.	O. H. Opland.
Napoleon	Logan	1,955	20	56.8	+ 3.7	89	9†	11	2	47	1.75	− 0.57	0.54	0	8	17	6	8	se.	C. J. Hoof.
New England	Hettinger	2,400	16	56.2	+ 4.7	98	31	12	1†	63	1.02	− 1.10	0.67	0	3	20	0	11	se.	J. L. McGovern.
New Rockford	Eddy	1,531	2								4.02		0.90	0	10					J. V. M. Sundberg.
New Salem	Morton	2,163	5	54.1		88	6†	14	1	43	1.09		0.37	0	9	11	17	3	nw.	J. Christianson.
Orange	Adams		5	55.6		92	17	6	1	50	0.78		0.40	0	3	26	3	2	nw.	J. E. Goforth.
Schafer	McKenzie		3																	V. G. Morris.
Steele	Kidder	1,857	16																	B. C. Smith.
Washburn	McLean	1,731	8	56.6		87	6	13	1	44	3.45		2.10	0	4	15	12	4	w.	W. R. Peterson.
Williston	Williams	1,875	32	54.0	− 0.8	87	5	16	2	52	2.81	+ 0.55	1.29	T.	14	6	12	13	se.	U. S. Weather Bureau.
South Dakota.																				
Aberdeen	Brown	1,300	21	59.3	+ 3.7	95	9†	23	1	47	4.23	+ 0.36	1.35	0	10	21	1	9	s.	D. G. Gallett.
Academy	Charles Mix		12	61.4	+ 3.3	96	9	21	1	45	2.35	− 0.89	0.92	0	10	13	11	7	s.	I. T. Lothrop.
Alexandria	Hanson	1,352	22			95	9†				1.15	− 2.25	0.70	0	3	20	7	4	s.	Albert Hill.
Ardmore	Fall River	3,557	2													12	12	7		Chi., Burl. & Quincy R. R.
Armour	Douglas	1,521	15	64.4	+ 6.0	97	18	23	1	46	3.53	+ 0.15	1.50	2.0	7	17	9	5	s.	T. J. Markey.
Bellefourche	Butte	3,000	3	56.4		88	8†	22	2	51	0.68		0.30	0	5	7	12	12	nw.	U. S. Reclamation Service.
Brookings	Brookings	1,636	22	61.4	+ 6.5	93	9	21	2	51	1.90	− 1.22	0.59	0	9	14	12	5	se.	Experiment Station.
Camp Crook	Harding	3,000	19	58.0	+ 3.9	90	31	27	3	52	0.57	− 1.67	0.27	0	6	13	11	7	se.	U. S. Forest Service.
Canton	Lincoln	1,248	16	63.6	+ 5.8	94	26	26	2	46	1.90	− 1.92	1.10	T.	7	19	11	1	se.	John H. Holsey.
Cascade Springs	Fall River	3,422	3	57.6		96	15	27	2	51	1.91		1.37	0	4	15	8	8	nw.	Fred Norenberg.
Castlewood	Hamlin	1,685	5	59.4		92	9†	17	2	53	1.81		0.55	0	10	11	10	10	s.	M. N. Bradley.
Centerville	Turner	1,229	14	63.0		93	18	26	1	48	1.11	− 3.11	0.26		8	10	18	3	n.w.	Frank Williams.
Clark	Clark	1,779	17	59.5	+ 4.4	93	9	21	1†	49	2.68	− 0.48	0.77	0	7	12	18	1	n.w.	O. H. La Craft.
Cottonwood	Stanley	2,414	3	60.6		96	6	20	1†	51	1.10		0.65	0	5	9	20	2	se.	Experiment Station.
Daviston	Perkins		2	56.2		92	6†	9	1	57	0.40		0.40	0	1	15	11	5	nw.	G. G. Davis.
Deadwood	Lawrence	4,535	2	53.6		85	25	20	1	44	1.30		0.40	0	7	23	6	2		R. E. Grimshaw.
Deerfield	Pennington	6,000	2								0.42		0.14	T.	7	15	8	8	s.w.	Frank E. Miller.
De Smet	Kingsbury	1,726	18	60.6[d]	+ 5.7	96	9	22	1†	51[d]	2.70	− 0.16	1.50	0	5	23	5	3	se.	J. O. Purintun.
Dowling	Stanley	2,250	2	59.4		95	6†	20	1	47	0.75		0.20	0	7	13	15	3	se.	M. P. Dowling.
Dumont	Lawrence	6,195	2								1.12		0.30		10	15	14	2	s.w.	A. B. Wood.
Eales	Potter										1.08		0.29	0	9	21	5	5	se.	A. H. Peterson.
Elk Mountain	Custer	4,700	2								0.41		0.19	0	4	8	17	6	se.	James E. Blaine.
Elk Point	Union	1,127	12	65.0	+ 4.0	95	18	26	2	46	2.13	− 1.67	1.03	1.0	7	19	6	6	s.	G. W. Freeman.
Ellingson	Perkins					90	14				0.69		0.49	0	2	17	10	4	nw.	A. C. Ellingson.
Englewood	Lawrence	5,723	2								0.28		0.05	T.	7	19	4	8	s.	T. J. Cummins.
Eureka	McPherson	1,884	2	59.5		93	14†	19	1	47	0.97		0.33	0	10	4	25	2	se.	Experiment Station.
Fairfax	Gregory		7	59.4[e]		95	9	22	1	45[e]									s.	D. Frank Adams.
Faulkton	Faulk	1,595	16	62.0	+ 6.4	94	17	23	1	44	2.41	− 0.19	1.11	0	7	20	6	5	se.	Miss Belle Talcott.
Flandreau	Moody	1,565	21	62.4	+ 6.5	93	18	24	3	50	1.39	− 2.71	0.50		6	15	10	6	s.	W. A. Harris.
Forestburg	Sanborn	1,231	19	62.6	+ 5.4	101	18	22	2	52	1.77	− 1.06	0.90	0	7	21	8	2	se.	S. S. Judy.
Frederick	Brown	1,371	3	57.8		95	9	16	1	55	2.20		1.02	0	7	18	9	4	se.	J. E. Jeffers.
Gannvalley	Buffalo		13	62.8	+ 5.6	98	9	23	2	44	2.98	+ 0.07	0.93	0	7	14	14	3	s.w.	V. P. Dripps.
Greenmont	Lawrence	6,430	2								2.40		0.90	4.0	6	19	9	3	w.	H. C. Hoffbuhr.
Greenwood	Charles Mix		17	62.6[i]	+ 2.2	96	18	24	1	43[i]	2.21	− 0.90	1.64	0	3					T. C. Williamson.
Hardy Ranger station	Lawrence	6,600	2								2.03		0.57	T.	7	16	2	13	s.w.	Mrs. Ennie A. Gundlach.
Harveys Ranch	do	6,282	1								1.10		0.32	1.2	7	12	10	9	w.	Jerome Harvey.
Hermosa	Custer	3,278	5	57.8		93	7	23	1	51	0.44		0.33	0	4	20	9	2	s.w.	S. M. Booth.
Highmore	Hyde	1,890	15	60.2	+ 3.8	94	9	22	1	49	1.91	− 0.44	1.28	0	6	17	6	8	se.	Experiment Station.
Hopewell	Stanley		1	60.8		96	14	22	1	52	1.16		0.46	0	4	15	8	8	s.	E. R. Myers.
Howard	Miner	1,564	19	60.6[c]	+ 4.1	94	9	21	1	55[c]	3.07	+ 0.34	1.64	0	8	12	16	3	s.w.	J. J. Cox.
Howell	Hand		9	60.6		98	9	20	2	49	2.82		1.11	0	8	17	11	3	se.	M. A. Shuster, jr.
Huron	Beadle	1,306	29	61.0	+ 3.7	95	9	23	2	44	2.97	+ 0.05	0.83	0	8	11	14	6	s.	U. S. Weather Bureau.
Ipswich	Edmunds	1,530	14	59.0	+ 4.1	93	17†	24	1†	48	1.66	− 2.59	0.68	0	4	23	5	3	se.	J. B. Taylor.
Kadoka	Stanley	2,467	2	60.3		94	14	23	1	46	1.78		1.00	0	8	6	14	11	nw.	Rev. D. S. Brown.
Kennebec	Lyman	1,689	18	60.4[d]	+ 3.2	98	9	25[a]	1	47[a]	2.03	− 0.29	0.75	0	5	18	8	5	se.	R. C. Van Horn.
Kidder	Marshall	1,295	7	60.2		93	14	20	3	45	3.53		1.05	0	5	16	7	8	s.	H. C. Schussler.
Kimball	Brule	1,788	22	60.6	+ 4.2	94	9	22	1	43	2.53	+ 0.06	0.55	0	9	20	7	4	se.	G. D. Rose.
La Delle	Spink	1,400	14	62.2	+ 6.2	96	9	20	2†	49	2.35	− 1.11	0.90	0	7	15	8	8	se.	E. L. Ebbert.
Lead	Lawrence	5,200	2	54.0		80	6†	19	1	36	0.84		0.30	T.	8	8	17	6	se.	E. F. Irwin.
Lemmon	Perkins	2,345	2																	W. E. Lyman.
Marion	Turner	1,447	10	64.8	+ 7.5	96	9	27	1†	45	1.84	− 2.64	0.78		7	7	23	1	se.	M. H. Dains.
Marston	Sully		3	59.2		98	9	20	1	52[a]	1.11		0.63	0	4	10	19	2	se.	John S. Walker.
Mellette	Spink	1,300	16	60.4	+ 4.3	94	17	24	1	46	3.29	+ 0.06	0.87	0	7	20	7	4	s.	Frank A. Howe.
Menno	Hutchinson	1,325	14	62.9	+ 4.1	95	18	24	1	45	1.91	− 1.95	0.90	1.5	6	18	8	5	se.	J. H. Swanton.
Milbank	Grant	1,148	20	60.4	+ 4.9	95	17†	17	2	55	1.52	− 1.88	0.46	0	7	17	3	11	nw.	I. T. Patridge.
Mitchell	Davison	1,312	17	62.2	+ 4.9	97	9	24	1	43	2.05	− 1.38	1.10	0	5	21	8	2	s.	C. W. Downey.
Mobridge	Walworth																			T. J. Morris.
Murdo	Lyman	2,300	3	59.8		94	9	21	1	47	1.72		1.00	0	4	14	11	6	se.	L. C. Bode.
Oelrichs	Fall River	3,339	19	58.4	+ 2.8	90	6†	27	1	50	0.97	− 2.04	0.97	0	1	11	18	2	se.	J. E. Strouse.
Orman	Butte	2,920	5	59.0		90	6†	20	2	50	0.76		0.24	0	5	11	16	4	w.	U. S. Reclamation Service.
Ottumwa	Stanley		3	58.0[i]		95	14	20	2	49										J. W. Bretz.
Pierre	Hughes	1,572	19	62.0	+ 2.7	96	9	26	1	38	1.66	− 0.47	0.67	0	10	12	12	7	se.	U. S. Weather Bureau.
Plankinton	Aurora	1,528	17								3.01	+ 0.49	1.19	0	7	14	13	4	se.	W. G. Andrews.
Pollock	Campbell		5	58.6		97	9	17	1	54	0.85		0.43	0	3	11	18	2	se.	J. H. Jones.
Rapid City	Pennington	3,251	23	56.9	+ 2.7	89	6	26	1	40	0.50	− 2.41	0.19	0	8	9	16	6	se.	U. S. Weather Bureau.
Redfield	Spink	1,295	13	59.7	+ 4.6	94	9†	19	1	46	1.80	− 1.17	0.75	0	4	20	3	8	s.	A. S. Hall.
Rochford	Pennington	5,228	1								0.65		0.18	0.5	8	12	10	9	nw.	Mrs. M. E. Deffenbaugh.
Rosebud	Todd	2,600	17	59.8	+ 2.3	90	9†	20	1	50[b]						9	17	5	sw.	W. M. Ege.
Rosebud Agency	do	2,600									1.35		0.70	0	5	21	3	7	s.	C. W. Soldier.
Roslyn	Day		5	58.4		91	17	18	2	46	2.85		0.63	0	10	14	14	3	s.	O. O. Floren.
Selby	Walworth		3	59.5		91	17	18	1	45	0.85		0.40	0	8	13	16	2	nw.	Miss Gertrude Hall.
Sioux Falls	Minnehaha	1,400	20	62.7	+ 5.0	95	17	28	1†	46	1.11	− 3.31	0.60		5	18	9	4	s.	J. H. Bechtold.
Spearfish	Lawrence	3,647	21																	O. A. Martin.
Stephan	Hyde	1,840	7	59.8		94	9	24[a]	2	46[a]	2.15		0.70	0	4	12	9	10	se.	Rev. A. Mattingly.
Tama	Meade		2																	J. J. Daly.
Tyndall	Bonhomme	1,418	14	63.0	+ 3.3	92	9†	24	1	40	2.35	− 1.40	0.73	8.0	8	16	13	2	sw.	F. F. Chladek.

TABLE 1.—*Climatological data for May, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
South Dakota—Contd.																				
Vale	Butte	2,765	3	58.0	.....	98	15	19	1†	55	0.04	.....	0.04	0	1	18	8	5	nw.	U. S. Reclamation Service.
Vermilion	Clay	1,222	10	64.8	+ 6.6	93	18	27	1†	43	1.35	− 3.20	0.81	1.5	7	27	3	1	s.	Prof. E. C. Perisho.
Waters Ranch	Lawrence	4,000	1	.....	.....	.....	.....	.....	.....	.....	0.85	.....	0.36	0	7	9	11	11	ne.	George Waters.
Watertown	Codington	1,735	17	60.4	+ 6.4	93	9	17	2	48	2.14	− 1.18	0.60	0	6	18	8	5	s.	R. Q. Wood.
Wentworth	Lake	.....	18	62.0	+ 6.4	94	18	26	1	44[b]	1.62	− 2.11	0.44	.....	8	26	4	1	se.	R. C. Zimmerman.
White Lake	Aurora	1,646	2	.....	.....	.....	.....	.....	.....	.....	3.11	.....	1.19	0	6	9	14	8	s.	Mrs. G. A. Rogers.
Winner	Tripp	2,500	...	60.0	.....	96	9	18	1	46	1.35	.....	0.61	0	4	20	10	1	nw.	A. L. Rawson.
Yankton	Yankton	1,234	37	63.1	+ 3.2	94	18	25	1	40	1.42	− 2.48	1.03	7.0	6	5	24	2	e.	U. S. Weather Bureau.
Minnesota.																				
Pipestone	Pipestone	1,710	11	60.6	+ 5.4	91	18	23	2	46	1.42	− 2.63	0.30	0	7	14	16	1	sw.	W. S. Campbell.
Colorado.																				
Akron	Washington	4,650	9	.....	.....	.....	.....	.....	.....	.....	0.93	.....	0.68	0	4	.....	.....	.....	.....	Ira M. Barnhouse.
Albion Lake	Boulder	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fred R. Dungan.
Alma	Park	10,238	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Anna B. Osborne.
Arriba (near)	Lincoln	5,238	5	53.8	.....	88	18†	13	4	51	1.05	.....	0.84	0	6	17	13	1	s.	C. A. Creel.
Auldhurst	Teller	8,500	1	.....	.....	.....	.....	.....	.....	.....	0.78	.....	0.30	3.5	4	13	10	8	s.	Mrs. Alice A. Auld.
Boulder	Boulder	5,347	15	58.1	+ 2.2	84	9†	30	1	42	0.90	− 2.18	0.30	0	8	11	13	7	.....	O. H. Wangelin.
Burlington	Kit Carson	4,160	8	60.2	.....	93	25	26	1	45	0.90	.....	0.50	0	6	7	20	4	se.	W. P. Davis.
Cassells	Park	8,445	1	.....	.....	.....	.....	.....	.....	.....	0.62	.....	0.20	0	8	20	9	2	w.	Harriet M. Cassell.
Castle Rock	Douglas	6,220	19	56.3	+ 2.8	86	18†	23	11	49	0.69	− 1.93	0.46	0	4	17	7	7	s.	Thos. Vaughan.
Cheesman	Jefferson	6,890	8	54.0	.....	78	24	28	1†	39	1.05	.....	0.45	T.	4	13	18	0	sw.	J. G. Thornburg.
Cheyenne Wells	Cheyenne	4,279	17	61.0	+ 3.5	95	19	27	1†	56	0.97	− 1.38	0.32	0	7	22	7	2	sw.	J. W. Adams.
Cope	Washington	.....	14	51.4	− 5.0	80	17	24	2†	43	2.32	− 1.10	2.00	0	4	17	8	6	s.	A. A. Williams.
Corona	Grand	11,660	4	30.6	.....	50	25†	10	19†	30	2.14	.....	0.98	16.5	6	.....	.....	.....	w.	U. S. Weather Bureau.
Denver	Denver	5,272	39	59.0	+ 2.3	85	17	33	1	40	0.52	− 2.02	0.22	0	7	9	18	4	sw.	Do.
Edgewater	Jefferson	5,450	3	57.8	.....	88	12	29	10	55	0.62	.....	0.26	0	6	14	7	10	.....	Dr. N. P. Levin.
Estes Park Hatchery	Larimer	8,000	2	.....	.....	.....	.....	.....	.....	.....	0.25	.....	0.20	0	2	2	21	8	w.	G. H. Thompson.
Fort Collins	....do	4,985	29	56.0	+ 1.4	84	24	31	2	45	0.72	− 2.29	0.23	0	7	10	19	2	.....	Colorado Agri. College.
Fort Lupton	Weld	4,907	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. W. Benedict.
Fort Morgan	Morgan	4,319	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Della M. Scott.
Frances	Boulder	9,300	6	48.0	.....	74	25†	23	1	37	0.21	.....	0.10	0	6	5	24	2	w.	C. W. Barry.
Frys ranch	Larimer	7,500	1	48.5	.....	78	25	19	1	44	0.55	.....	0.23	0.2	5	13	16	2	w.	Norman W. Fry.
Georgetown	Clear Creek	8,550	9	.....	.....	.....	.....	.....	.....	.....	1.00	.....	0.32	T.	8	4	21	6	.....	H. L. Corbett.
Greeley	Weld	4,649	20	58.6	+ 2.2	88	9†	31	2	47	1.31	− 1.28	0.83	0	6	19	11	1	se.	Nelson Reynolds.
Hartsel	Park	7,670	2	.....	.....	.....	.....	.....	.....	.....	0.66	.....	0.48	0	4	25	1	5	.....	Emily Kleinknecht.
Hawthorne	Boulder	6,000	2	.....	.....	.....	.....	.....	.....	.....	0.55	.....	0.32	0	3	23	6	2	.....	B. E. Chesebro.
Holyoke (near)	Phillips	3,745	15	.....	.....	.....	.....	.....	.....	.....	0.79	− 2.37	0.52	0	4	21	3	7	se.	A. C. Cauble.
Idaho Springs	Clear Creek	7,534	11	52.0	+ 3.8	77[c]	25	25	1	43[c]	0.79	− 1.52	0.28	0	7	1	29	1	w.	J. J. Willis.
Keota	Weld	4,966	...	.....	.....	.....	.....	.....	.....	.....	1.63	.....	0.76	0	4	13	13	5	s.	I. S. Griffin.
Laporte	Larimer	5,053	20	.....	.....	.....	.....	.....	.....	.....	1.85	− 1.28	1.10	0	5	.....	.....	.....	.....	P. A. Taft.
Leroy (near)	Logan	4,380	22	.....	.....	.....	.....	.....	.....	.....	1.74	− 0.82	0.93	0	6	6	20	5	se.	Chas. Green.
Longmont	Boulder	4,980	10	58.2	+ 1.6	87	24	29	10	57	1.00	− 2.60	0.23	0	9	23	4	4	w.	Great Western Sugar Co.
Longs Peak (near)	Larimer	8,600	16	42.6	+ 1.2	70	25	14	11	42	0.73	− 1.73	0.20	3.0	5	15	13	3	n.	Enos E. Mills.
Lula Pass	....do	.....	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. M. McCahan.
Moraine Park	....do	7,775	21	47.6	+ 2.3	73	25	22	21	39	T.	− 2.35	T.	T.	0	3	28	0	w.	J. D. Stead.
Platte Canon	Jefferson	5,492	12	.....	.....	.....	.....	.....	.....	.....	0.33	− 1.99	0.16	0	4	24	6	1	sw.	Denver Union Water Co.
St. Cloud	Larimer	7,750	8	.....	.....	.....	.....	.....	.....	.....	0.25	.....	0.15	T.	2	15	15	1	nw.	Miss Guilla Sivers.
Sedgwick	Sedgwick	3,573	3	60.5	.....	94	26	20	1	50	1.47	.....	0.65	0	6	10	18	3	se.	Edwin Lewis, M. D.
Sill Mine	Clear Creek	11,500	2	35.1	.....	54	30	10	20	28	1.74	.....	0.40	17.0	8	19	8	4	w.	Chas. F. Deininger.
Spicer (near)	Larimer	8,700	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank W. Murphy.
Sterling	Logan	3,892	2	58.2	.....	88	25	27	1	49	1.99	.....	1.28	0	4	10	15	6	se.	Great Western Sugar Co.
Waterdale	Larimer	5,206	8	56.8	.....	85	17†	29	2	45	0.76	.....	0.24	0	5	.....	.....	.....	.....	P. H. Boothroyd.
Wray	Yuma	3,512	15	61.2	+ 2.1	94	24†	27	1	48	2.50	− 0.22	2.23	0	6	11	16	4	s.	J. C. Toumey.
Yuma	....do	4,138	20	.....	.....	.....	.....	.....	.....	.....	1.02	− 1.38	0.94	0	2	15	9	7	se.	George W. Custer.
Nebraska.																				
Ainsworth	Brown	2,521	6	60.9	.....	92	9†	19	2	36	5.50	.....	3.50	0	8	0	22	9	sw.	John M. Cotton.
Albion	Boone	1,747	16	62.3	+ 2.4	95	18	23	2	40	2.38	− 1.73	1.21	0	7	20	5	6	s.	F. M. Weitzel.
Alliance	Boxbutte	3,968	20	54.8	− 0.4	87	9†	7	1	46	0.90	− 1.94	0.40	0	3	13	12	6	sw.	J. A. Keegan.
Alma	Harlan	1,938	16	63.6	+ 2.5	96	9	27	2	44	1.61	− 1.70	1.03	0	5	14	11	6	s.	W. A. Sharpnack.
Anoka	Boyd	.....	5	61.6	.....	98	9	20	2	51	1.50	.....	1.05	0	6	8	18	5	se.	W. Whitla.
Arcadia	Valley	2,186	11	.....	.....	.....	.....	.....	.....	.....	3.64	− 0.08	2.24	2.0	5	7	16	8	se.	J. L. Owen.
Ashland	Saunders	1,100	27	64.6	+ 2.3	91	25	29	2	32	4.68	+ 0.36	1.51	0	11	17	10	4	s.	Dr. A. S. von Mansfelde.
Ashton	Sherman	2,061	19	.....	.....	.....	.....	.....	.....	.....	2.84	− 0.20	1.73	0	7	16	6	9	s.	F. Rein.
Atkinson	Holt	2,108	4	60.1	.....	93	17	18	2	37	1.68	.....	1.20	0	4	19	11	1	nw.	C. J. Wilson.
Auburn	Nemaha	1,051	19	65.1	+ 3.5	95	26	30	2	47	2.54	− 3.19	0.60	.....	12	16	7	8	s.	J. R. Huffman.
Aurora	Hamilton	1,792	19	64.0	+ 2.7	93	25	25	1	38	2.28	− 1.78	1.40	.....	3	20	9	2	w.	Chi., Burl. & Quincy R. R.
Beatrice	Gage	1,235	21	66.6	+ 5.0	93	24	29	2	36	2.04	− 2.40	0.96	.....	10	19	4	8	sw.	W. S. Waxham.
Beaver City	Furnas	2,147	20	65.8	+ 3.6	97	18	28	2	47	2.06	− 0.86	1.42	0	7	8	17	6	se.	T. M. Davis.
Bellevue	Sarpy	1,210	30	65.6	.....	93	24	30	2	32	4.29	+ 0.07	1.50	T.	10	17	6	8	se.	Prof. A. A. Tyler.
Benkelman	Dundy	2,968	15	.....	.....	.....	.....	.....	.....	.....	2.20	− 0.47	1.50	0	2	4	18	9	se.	R. D. Druliner.
Bertrand	Phelps	2,515	3	.....	.....	.....	.....	.....	.....	.....	2.67	.....	1.36	0	9	15	8	8	se.	W. F. Dobbin.
Blair	Washington	1,122	16	64.9	+ 4.3	92	25	28	2	39	3.75	− 1.20	1.19	1.0	7	18	8	5	sw.	D. C. Van Deusen.
Bloomfield	Knox	.....	4	65.2[d]	.....	95[b]	18	24	1	36[b]	1.40	.....	1.20	0	2	10	19	2	s.	Dr. L. C. Bleick.
Bradshaw	York	1,715	13	.....	.....	.....	.....	.....	.....	.....	2.44	− 2.95	1.00	2.0	4	17	12	2	.....	E. C. Roggy.
Bridgeport	Morrill	3,658	15	57.0	+ 1.3	90	23	15	1	52	0.30	− 2.27	0.30	0	1	11	12	8	se.	R. H. Willis.
Broken Bow	Custer	2,477	17	.....	.....	.....	.....	.....	.....	.....	4.04	+ 0.73	2.20	2.5	6	14	5	12	.....	Chi., Burl. & Quincy R. R.
Burge	Cherry	2,674	6	57.2	.....	94	14	11	2	54[a]	2.30	.....	1.10	0	3	.....	.....	.....	s.	H. A. Davis.
Cairo	Hall	1,951	2	.....	.....	.....	.....	.....	.....	.....	2.16	.....	1.20	.....	5	.....	.....	.....	.....	Elliott Harrison.
Callaway	Custer	2,555	19	59.1	+ 0.8	96	9	24	1	52	2.61	− 0.42	1.65	.....	4	13	10	8	s.	J. H. Evans.
Cambridge	Furnas	2,258	4	63.9	.....	99	18†	28	1	52	1.64	.....	1.03	0	5	9	13	9	se.	Chas. Jensen.
Canton (near)	Sioux	.....	3	51.8	.....	86	15	3	1	53[a]	0.76	.....	0.36	0	7	8	10	13	se.	A. E. Hann.
Columbus	Platte	1,442	18	62.8	+ 2.4	92	26	26	2	40	5.51	+ 1.34	3.42	.....	6	17	6	8	se.	A. L. Rush.
Cozad	Dawson	2,496	3	.....	.....	.....	.....	.....	.....	.....	2.48	.....	1.56	.....	5	14	8	9	s.	A. A. Luttin.
Creighton	Knox	1,600	14	64.3	+ 6.2	93	18	22	1	40	1.08	− 2.34	0.90	0	4	15	15	1	s.	C. L. Cherry.
Crete	Saline	1,368	28	65.5	+ 4.4	92	10†	28	2	32	4.49	+ 0.03	1.20	0	8	14	7	10	s.	Doane College.
Culbertson	Hitchcock	2,565	24	61.6	.....	97	9†	22	1	50	2.26	− 0.44	1.53	.....	9	4	11	16	nw.	J. H. Corrick.
Curtis	Frontier	2,553	14	63.0	+ 1.1	95	18	25	1	44	4.54	+ 1.40	2.34	0.0	9	12	11	8	s.	Dr. S. R. Razee.
David City	Butler	1,619	21	64.0	+ 5.1	91	18	28	2	34	3.64	− 0.82	2.57	0.5	6	14	9	8	se.	S. Clingman.
Dawson	Richardson	945	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. E. I. Atkinson.
Dubois	Pawnee	1,074	6	.....	.....	.....	.....	.....	.....	.....	2.09	.....	0.60	.....	11	18	6	7	se.	O. M. Backus.

TABLE 1.—*Climatological data for May, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nebraska—Contd.																			
Ellis	Gage	1,430	6	.....	.....	.....	.....	.....	.....	.....	1.30[a]	.....	.....	.....	.....	.....	.....	.....	.....	D. J. Wood.
Elmcreek	Buffalo	2,268	3	.....	.....	.....	.....	.....	.....	.....	3.00[a]	.....	2.00	.....	.....	.....	.....	.....	.....	E. L. Sutton.
Elsie	Perkins	3,382	3	.....	.....	.....	.....	.....	.....	.....	2.35	.....	0.70	T.	12	.....	.....	.....	.....	J. F. Brittain.
Ewing	Holt	1,888	20	63.3	.....	98	9†	20	2	50	1.67	− 1.43	1.04	0	5	.....	.....	.....	.....	G. H. Benson.
Fairbury	Jefferson	1,316	36	65.6	+ 3.5	95	24	28	2	40	2.03	− 2.75	0.85	.....	9	12	13	6	s.	W. F. Cramb.
Fairmont	Fillmore	1,641	18	61.6	+ 1.5	92	14†	26	1†	43	2.20	− 1.82	0.57	2.0	10	16	6	9	s.	Chi., Burl. & Quincy R. R.
Fort Robinson	Dawes	3,764	28	52.4	− 2.7	89	23	10	1	50	1.72	− 0.97	0.40	.....	11	20	2	9	sw.	Post Surgeon.
Franklin	Franklin	1,820	22	64.3	+ 2.9	98	9	25	2	50	1.63	− 4.93	0.99	T.	3	11	11	9	s.	A. R. Peck.
Fremont	Dodge	1,203	31	64.2	+ 4.1	93	25	29	2	37	3.08	− 1.20	1.69	0	5	14	14	3	se.	Ernest Hahn.
Fullerton	Nance	1,629	10	62.9	.....	94	18†	26	1	40	7.33	+ 2.86	4.10	1.0	6	21	8	2	s.	Dr. F. W. Johnson.
Geneva	Fillmore	1,633	21	63.9	+ 2.1	93	25	26	2	41	2.70	− 2.07	1.00	0	8	19	6	6	se.	F. M. Flory.
Genoa	Nance	1,584	36	62.6	+ 2.5	91	24†	26	1	38	5.28	+ 0.99	2.70	1.0	5	18	7	6	s.	F. W. Parsons.
Gordon	Cherry	3,550	8	55.2[a]	.....	90	9	18	1	47[c]	0.43	.....	0.23	0	2	.....	.....	.....	se.	G. F. Williams.
Gosper	Gosper	.....	9	.....	.....	.....	.....	.....	.....	.....	2.13	.....	1.61	.....	6	6	18	7	se.	E. H. Stoll.
Gothenburg	Dawson	2,557	16	62.4	+ 2.4	97	18	25	1	47	2.53	− 0.63	0.85	.....	9	12	8	11	s.	Dr. W. J. Bartholomew.
Grand Island	Hall	1,860	21	64.2	+ 3.4	96	18	24	1	35	2.71	− 1.85	0.92	.....	5	11	8	12	s.	E. A. Barnes.
Grant	Perkins	3,405	8	58.0	.....	94	9†	15	1	54[b]	1.86	.....	1.15	.....	6	.....	.....	.....	sw.	Cyrus Carver.
Greeley	Greeley	2,021	15	60.4	.....	92	9†	25	1	38	3.62	+ 0.57	1.90	.....	5	8	20	3	se.	W. E. Morgan.
Guiderock	Webster	1,646	11	.....	.....	.....	.....	.....	.....	.....	2.06	− 2.10	0.95	0	3	6	16	9	.....	J. S. Marsh.
Halsey	Thomas	2,695	9	61.8	.....	96	9†	20	1†	49	2.53	.....	0.57	0	13	18	4	9	se.	U. S. Forest Service.
Hartington	Cedar	1,309	20	62.6	+ 4.4	94	9†	23	1	48	2.77	− 1.47	1.20	.....	5	14	9	8	nw.	D. E. Ewing.
Harvard	Clay	1,812	22	61.6	+ 1.9	93	25	24	1	40	1.88	− 2.04	1.00	.....	6	18	8	5	s.	Dr. J. T. Fleming.
Hastings	Adams	1,932	22	62.8	+ 2.4	96	9	26	1	41	1.66	− 2.05	0.60	.....	5	16	8	7	se.	Chi., Burl. & Quincy R. R.
Hayes Center	Hayes	.....	18	60.2	.....	97	16	24	1	46	2.10	− 0.98	1.50	0	9	16	9	6	se.	C. A. Ready.
Hay Springs	Sheridan	3,821	24	54.8	+ 0.8	85	9†	11	1	43	1.93	− 1.39	0.50	.....	8	8	16	7	s.	A. Kadlecek.
Hebron	Thayer	1,458	25	64.0	+ 2.3	94	10	27	2	38	2.41	− 2.07	0.75	T.	8	.....	.....	.....	.....	Dr. C. M. Easton.
Hemingford	Boxbutte	4,256	2	.....	.....	.....	.....	.....	.....	.....	1.15	.....	0.36	0	8	.....	.....	.....	.....	A. S. Enyeart.
Hendley	Furnas	2,231	7	.....	.....	.....	.....	.....	.....	.....	2.27	.....	1.80	.....	5	.....	.....	.....	.....	T. L. Jones.
Hillside	McPherson	3,484	2	57.1	.....	93	24	15	1	53	1.41	.....	0.40	0.6	9	15	7	9	se.	Mrs. M. R. Lloyd.
Holdrege	Phelps	2,324	20	62.5	+ 1.8	97	9	27	1†	41	2.62	− 1.98	1.50	.....	6	19	2	10	se.	Chi., Burl. & Quincy R. R.
Hooper	Dodge	1,228	14	64.4	+ 3.3	92	25	26	2	33	3.70	− 0.67	1.87	T.	5	.....	.....	.....	.....	Dr. W. H. Heine.
Imperial	Chase	3,278	21	63.3[a]	+ 4.7	94	24	23	1	49	2.19	− 0.79	1.42	0	5	.....	.....	.....	se.	Robt. Malcolm.
Kearney	Buffalo	2,146	23	63.8	+ 2.7	96	25	26	1	39	1.45	− 2.77	0.80	0	4	10	14	7	s.	City Engineer.
Kimball	Kimball	4,697	23	57.0	+ 2.2	89	24	21	1	54	0.49	− 2.09	0.18	0	4	12	16	3	s.	F. J. Bellows.
Kirkwood	Rock	.....	16	56.2	− 1.8	95	9†	18[a]	2	50	3.62	+ 0.22	2.00	0	6	15	8	8	s.	Mrs. C. Arter.
Kowanda	Deuel	.....	3	.....	.....	.....	.....	.....	.....	.....	1.17	.....	0.35	0	6	.....	.....	.....	.....	Geo. W. Hulse.
Lexington	Dawson	2,385	22	62.8	+ 3.8	95	9†	26	1	56	2.19	− 0.77	0.90	0	7	19	0	12	se.	Robt. Chadwick.
Lincoln	Lancaster	1,189	33	65.4	+ 2.5	94	25	31	2	44	3.95	− 0.30	1.23	T.	11	10	9	12	s.	U. S. Weather Bureau.
Lodgepole	Cheyenne	3,820	15	57.9	+ 1.9	93	9	15	1	52	1.31	− 1.22	0.48	0	5	17	8	6	e.	R. T. Kidney.
Loup	Sherman	2,067	16	60.9	+ 1.3	95	18	23	2	45	2.44	− 0.82	1.75	0	6	19	5	7	se.	E. S. Hayhurst.
Loyal	Custer	.....	3	.....	.....	.....	.....	.....	.....	.....	3.30	.....	2.35	0	5	16	8	7	s.	C. H. Cass.
McCook	Redwillow	2,506	17	61.2	− 1.4	97	18†	26	1	51	1.25	− 1.84	1.10	0	2	21	6	4	s.	C. G. Coglizer.
McCool Junction	York	1,575	14	.....	.....	.....	.....	.....	.....	.....	2.74	− 2.01	0.77	.....	7	.....	.....	.....	.....	L. L. Slagle.
Madison	Madison	1,585	18	65.0[a]	+ 6.0	92	18†	27[c]	4	36[c]	2.33	− 1.97	1.48	T.	5	.....	.....	.....	.....	Dr. F. A. Long.
Marquette	Hamilton	1,830	32	.....	.....	.....	.....	.....	.....	.....	2.58	− 1.42	1.52	0.5	6	.....	.....	.....	.....	John Ellis.
Mason City	Custer	2,257	9	.....	.....	.....	.....	.....	.....	.....	3.32	.....	2.40	0	4	.....	.....	.....	.....	J. A. Amsberry.
Minatare	Scotts Bluff	3,825	2	.....	.....	.....	.....	.....	.....	.....	0.94	.....	0.94	0	1	20	0	11	se.	A. Kennedy.
Minden	Kearney	2,169	34	62.6	+ 2.7	97	9	26	1†	43	1.76	− 2.96	0.95	0.3	5	11	12	8	s.	Joel Hull.
Mitchell	Scotts Bluff	3,950	2	55.8	.....	88	9†	16	1	47	0.75	.....	0.31	.....	6	11	11	9	se.	U. S. Reclamation Service.
Nebraska City	Otoe	941	35	66.8	+ 4.8	94	24	30	2	32	2.49	− 2.22	0.90	0	9	14	6	11	s.	Chi., Burl. & Quincy R.
Norfolk	Madison	1,532	29	63.5	+ 4.4	95	18	24	2	40	1.68	− 2.32	1.20	0.5	4	24	3	4	s.	Dr. P. H. Salter.
North Loup	Valley	1,961	23	62.6	+ 3.4	95	9	25	2	44	3.31	+ 0.04	1.33	.....	6	14	11	6	se.	W. G. Rood.
North Platte	Lincoln	2,841	37	59.5	+ 0.5	95	24	23	1	46	1.73	− 1.33	0.77	0.4	11	11	11	9	s.	U. S. Weather Bureau.
Oakdale	Antelope	1,722	25	62.1	+ 3.6	95	18	24	1†	43	2.55	− 1.22	1.43	0	5	12	14	5	s.	G. S. Clingman.
Omaha	Douglas	1,103	41	66.3	+ 3.8	94	25	33	1	39	2.70	− 1.80	0.74	0.2	11	13	8	10	s.	U. S. Weather Bureau.
Ord	Valley	2,062	16	.....	.....	.....	.....	.....	.....	.....	1.96	− 1.23	1.44	0	3	7	18	6	s.	Jas. Milford.
Orleans	Harlan	1,993	4	.....	.....	.....	.....	.....	.....	.....	1.81	.....	1.29	0	4	.....	.....	.....	.....	Jas. McGeachin.
Osceola	Polk	1,644	14	63.4	.....	96	31	26	1	44[b]	2.58	− 2.00	1.95	0	3	.....	.....	.....	s.	G. T. Ray.
Palisade	Hitchcock	.....	3	.....	.....	.....	.....	.....	.....	.....	1.44	.....	1.20	0	5	.....	.....	.....	.....	E. E. Young.
Palmyra**	Otoe	1,142	17	66.3	+ 4.5	94	25	34	1	....	2.66	− 2.06	0.91	0	8	16	14	1	s.	Thos. Coles.
Pawnee City	Pawnee	1,175	16	67.0	.....	95	24†	29	2	38	1.16	− 3.76	0.48	.....	4	17	5	9	s.	F. A. Barton.
Paxton	Keith	3,060	4	.....	.....	.....	.....	.....	.....	.....	1.73	.....	0.56	.....	9	.....	.....	.....	se.	H. D. Lute.
Plymouth	Jefferson	1,419	7	64.8	.....	94	25	28	2	40	1.79	.....	1.00	0	9	7	15	9	.....	John Ruppel.
Purdum	Blaine	.....	11	59.1	+ 2.7	94	9†	16	2	47	2.96	− 0.18	1.75	0	10	16	5	10	se.	T. C. Jackson.
Ravenna	Buffalo	2,028	34	62.5	+ 3.3	95	9†	23	1	47	2.72	− 0.68	1.25	3.0	6*	13	10	8	se.	H. G. Smith.
Red Cloud	Webster	1,687	18	64.6	+ 2.8	93	9†	27	2	44	1.62	− 1.61	0.73	T.	6	20	3	8	s.	Chas. S. Ludlow.
St. Libory	Howard	1,887	16	.....	.....	.....	.....	.....	.....	.....	3.89	− 0.29	1.80	0.5	5	15	9	7	s.	W. I. Meader.
St. Paul	do	1,796	16	63.2	+ 2.0	94	25	26	1†	41	4.43	+ 0.86	1.68	T.	7	19	8	4	sw.	Paul Anderson.
Santee	Knox	.....	24	67.3	+ 5.9	96	9†	25	1	49	1.97	− 1.51	1.27	3.0	4	18	8	5	se.	Nat H. Neff.
Sargent	Custer	2,339	17	58.2	.....	95	17	21	1	47[b]	2.55	− 0.04	2.00	.....	3	.....	.....	.....	se.	J. L. Ferguson.
Schuyler	Colfax	1,357	19	64.8	.....	94	15	25	2	35	3.95	− 0.62	2.20	0	6	17	8	6	s.	J. T. Sumner.
Scottsbluff	Scotts Bluff	3,888	5	56.8	.....	89	9†	18	1	48	1.30	.....	0.81	0	6	12	13	6	se.	A. B. McCoskey.
Seward	Seward	1,435	21	63.6	+ 2.4	90	9†	29	1	33	4.22	− 0.37	1.20	.....	8	15	13	3	se.	Chi., Burl. & Quincy R. R.
Sheridan	Wheeler	.....	3	.....	.....	.....	.....	.....	.....	.....	2.05	.....	0.49	0	9	19	6	6	s.	J. M. Kenney.
Sidney	Cheyenne	4,090	18	.....	.....	.....	.....	.....	.....	.....	0.86	− 1.86	0.34	0	9	22	5	4	se.	John P. Fischer.
Springview	Keyapaha	.....	20	59.6	+ 2.2	95	9	18	1	50	2.71	− 0.26	1.05	0	8	7	16	8	s.	C. L. Phelps.
Stanton	Stanton	1,472	21	63.8	+ 4.3	92	17†	25	1	41[a]	2.21	− 1.73	1.51	0	3	18	11	2	s.	Alfred Pont.
Stratton	Hitchcock	2,804	16	.....	.....	.....	.....	.....	.....	.....	1.33	− 1.27	1.20	0	3	.....	.....	.....	.....	Miss Stella Vennum.
Superior	Nuckolls	1,574	26	.....	.....	.....	.....	.....	.....	.....	2.10	− 1.62	0.95	0	4	.....	.....	.....	.....	F. V. Bishop.
Syracuse	Otoe	1,059	19	65.5	+ 3.9	94	25	28	2	34	2.26	− 2.18	0.73	0	9	15	6	10	sw.	W. N. Hunter.
Tablerock	Pawnee	1,023	24	.....	.....	.....	.....	.....	.....	.....	1.18	− 3.07	0.47	0	8	15	12	4	s.	E. D. Howe.
Tecumseh	Johnson	1,113	33	.....	.....	.....	.....	.....	.....	.....	1.78	− 2.98	0.52	.....	10	12	9	10	.....	L. E. Pratt.
Tekamah	Burt	1,060	21	64.3	+ 3.5	93	25	28	2	41	4.09	− 0.21	1.55	0.5	9	21	4	6	s.	Dr. A. D. Nesbit.
Tobias	Saline	1,597	2	.....	.....	.....	.....	31	1†	....	3.44	.....	1.32	T.	8	12	7	12	.....	Frank Ainsworth.
University Farm	Lancaster	.....	29	65.0	+ 3.6	91	10†	29	2	35	3.33	− 1.12	1.10	.....	8	14	12	5	.....	S. W. Perin.
Valentine	Cherry	2,613	23	58.7	+ 0.8	91	9	20	1	40	1.37	− 1.96	0.47	0	10	14	11	6	s.	U. S. Weather Bureau.
Wahoo	Saunders	1,187	8	.....	.....	.....	.....	.....	.....	.....	3.50	.....	2.20	.....	5	21	3	7	sw.	W. T. Mauck.
Wakefield	Dixon	1,387	17	63.4	+ 4.4	94	18	27	1	37	1.44	− 2.60	0.52	0	5	15	12	4	s.	I. H. Weaver.
Walthill	Thurston	.....	10	61.8[d]	.....	93	19	28	2	52[d]	2.52	− 1.93	1.03	0.5	5	.....	.....	.....	.....	A. P. Coleman.
Watertown	Buffalo	2,299	6	.....	.....	.....	.....	.....	.....	.....	2.94	.....	1.65	0	6	10	13	8	sw.	R. E. Swift.
Wauneta	Chase	.....	13	.....	.....	.....	.....	.....	.....	.....	1.75	− 0.93	1.00	.....	4	.....	.....	.....	.....	C. D. Fuller.
Weeping Water	Cass	1,080	33	65.7	.....	97	26	28	2	39	4.01	− 0.28	0.99	T.	10	17	0	14	s.	S. W. Orton.
Westpoint	Cuming	1,313	26	65.3	+ 4.6	93	18	29	2	42	2.96	− 0.86	1.63	T.	3	23	6	2	s.	J. C. Elliot.
Wisner	do	1,380	15	.....	.....	.....	.....	.....	.....	.....	2.84	− 1.71	2.02	.....	4	.....	.....	.....	.....	F. C. Evans.
York	York	1,633	24	64.3	+ 2.9	94	25	26	1	36	2.91	− 1.43	1.42	5.0	6	17	10	4	sw.	A. T. Giauque.

TABLE 1.—*Climatological data for May, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Iowa.																			
Afton	Union	1,212	17	64.8	+ 2.5	88	25	32	2	37	2.00	− 2.89	0.45	0	8	15	9	7	sw.	Hon. N. W. Rowell.
Allerton	Wayne		9	66.1	.....	91	25	32	2	35	1.80	.....	0.58	T.	11	24	3	4	sw.	Mrs. Geo. Shriver.
Alton	Sioux	1,305	6	63.0	.....	91	17†	29	1†	46	2.16	.....	0.87	.....	7	14	13	4	nw.	W. S. Slagle.
Atlantic	Cass	1,164	20	65.0	+ 5.6	92	24†	30	2	35	4.32	− 0.06	1.27	T.	11	8	5	18	sw.	Thos. H. Whitney.
Audubon	Audubon	1,301	17	63.8	+ 3.9	91	25	31	1†	34	3.59	− 0.85	1.25	1.0	11	15	6	10	sw.	Geo. E. Kellogg.
Bedford	Taylor		11	65.2	+ 4.2	93	24†	30	2	43	3.35	− 1.90	1.25	T.	10	15	5	11	s.	E. E. Healy.
Centerville	Appanoose		1	67.9	.....	93	25	32	2	35	4.12	.....	1.90	.....	9	20	9	2	s.	Gordon Peacock, jr.
Chariton	Lucas	1,042	16	65.2	+ 3.9	89	25	32	2	37	4.57	+ 0.20	1.80	0	8	18	7	6	s.	C. C. Burr.
Clarinda	Page	1,009	21	61.4	+ 0.2	95	25	30	2	35	4.74	− 0.10	1.36	.....	11	.....	.....	.....	s.	A. S. Van Sandt.
Corning	Adams	1,117	19	64.0	+ 3.6	93	25	30	2	31	3.85	− 0.98	1.21	.....	8	12	11	8	sw.	Jerome Smith.
Corydon	Wayne	1,101	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. J. C. Bower.
Council Bluffs	Pottawattamie		1	65.2	.....	93	9†	28	2	36	4.05	.....	1.01	.....	8	8	4	19	se.	B. W. Crossley.
Creston	Union	1,312	6	63.5	.....	93	25	31	2	44	2.88	.....	0.81	.....	11	9	12	10	sw.	O. J. Colby.
Cumberland	Cass		12	.....	.....	.....	.....	.....	.....	.....	2.86	− 0.83	1.12	0	7	17	7	7	sw.	J. H. Reppert.
Denison	Crawford	1,180	17	63.1	+ 3.8	90	10†	30	2	35[d]	2.94	− 1.17	1.04	1.0	10	19	8	4	s.	W. C. Van Ness.
Elliott	Montgomery		6	65.4	.....	91	25	31	2	33	3.23	.....	1.04	.....	9	12	10	9	sw.	Henry Barnes.
Greenfield	Adair		19	64.6	+ 4.2	91	25	30	2	37	5.09	+ 0.07	1.70	T.	7	14	16	1	sw.	R. B. Oldham.
Harlan	Shelby	1,182	12	63.2	+ 2.9	91	25	30	2	35	5.00	+ 0.75	1.69	T.	12	10	13	8	s.	C. A. Reynolds.
Inwood	Lyon	1,474	7	63.8	.....	91	17†	25	2	42	1.31	.....	0.53	2.5	8	17	12	2	se.	F. B. Hanson.
Lamoni	Decatur		4	65.0	.....	90	25†	32	2	33	1.60	.....	0.34	0	10	18	2	11	se.	T. J. Fitzpatrick.
Larrabee	Cherokee	1,266	21	62.6	+ 4.3	90	18	27	2	41	1.64	− 2.88	0.68	2.4	4	11	15	5	s.	Alonzo Pruitt.
Le Mars	Plymouth	1,224	15	62.9	+ 3.6	88	18†	29	2	37	2.25	− 2.54	0.94	.....	6	17	12	2	se.	G. A. C. Clarke.
Lenox	Taylor	1,250	16	62.8	+ 1.6	90	24†	30	2	39	3.34	− 1.38	0.75	T.	9	18	3	10	s.	J. L. Hurley.
Leon	Decatur	1,120	9	65.9	.....	91	25	31	2	36	2.80	.....	0.95	T.	7	15	6	10	s.	Morris Gardner.
Little Sioux	Harrison		6	64.8	.....	93	25	25	2	43	3.87	.....	1.35	.....	7	16	6	9	se.	Geo. H. Gibson.
Logan	do	928	44	65.3	+ 4.3	91	24†	27	2	35	5.44	+ 1.31	2.10	.....	10	18	10	3	se.	Glenn H. Stern.
Mount Ayr	Ringgold	1,236	18	66.2	+ 4.5	91	25	32	2	37	4.07	− 1.69	0.97	.....	12	14	9	8	sw.	A. F. Beard.
Murray	Clarke		20	64.9	+ 4.7	91	25	31	2	42	3.24	− 1.45	0.64	.....	11	8	15	8	s.	M. T. Ashley.
Odebolt	Sac		14	64.7	+ 4.3	94	24†	29	2	41	2.41	− 1.57	0.80	0	8	18	9	4	.....	E. Starner.
Onawa	Monona	1,051	11	66.2	+ 3.6	93	18†	28	2	36	3.12	− 2.46	1.10	2.0	10	20	9	2	s.	C. G. Perkins.
Pacific Junction	Mills	960	12	64.5	+ 2.9	93	25	27	2	41	3.46	− 0.55	1.15	.....	7	12	18	1	s.	H. H. McCartney.
Rock Rapids	Lyon	1,358	12	64.1	+ 4.5	94	18	25	3	48	1.23	− 2.16	0.40	.....	7	.....	.....	.....	.....	W. C. Wyckoff.
Sheldon	O'Brien	1,422	11	64.6	+ 6.7	95	19	27	2†	46	0.91	− 4.19	0.55	1.0	5	24	5	2	s.	Dr. A. W. Beach.
Sibley	Osceola	1,212	18	61.6	+ 4.3	91	17	25	3	44	1.84	− 2.12	0.56	T.	9	15	12	4	sw.	H. G. Doolittle.
Sioux Center	Sioux		12	62.4	+ 4.1	91	18	28	1	38	2.63	− 2.22	1.02	3.0	7	20	8	3	s.	J. de Ruyter.
Sioux City	Woodbury	1,135	22	64.0	+ 3.2	92	25	31	1	33	1.54	− 2.83	1.40	1.0	6	11	14	6	s.	U. S. Weather Bureau.
Spencer	Clay		1	64.8[d]	.....	91	17†	34	5†	44[d]	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. Gillespie.
Thurman	Fremont		14	66.2	+ 3.9	93	24†	30	2	35	6.23	+ 1.03	1.64	.....	10	.....	.....	.....	sw.	C. R. Paul.
Washta	Cherokee	1,157	13	62.2	.....	91	18	28	2†	40	1.66	− 3.19	0.73	.....	4	21	5	5	s.	H. L. Felter.
Woodburn	Clarke	961	12	66.0	.....	91	24†	30	3†	40	2.88	− 2.01	0.76	T.	10	13	10	8	sw.	C. B. McDonough.
Kansas.																				
Abilene	Dickinson	1,157	16	.....	.....	.....	.....	.....	.....	.....	1.84	− 2.54	0.68	0	6	8	12	11	s.	T. W. Sherman.
Agricultural College	Riley	1,100	53	67.6	+ 2.6	96	24†	29	2	46	2.18	− 2.33	0.62	0	7	17	5	9	s.	Prof. J. O. Hamilton.
Alton	Osborne	1,651	9	67.0	.....	99	9	27	2	43	1.54	− 1.88	0.61	0	6	13	9	9	s.	H. A. Storer.
Atchison	Atchison	973	20	68.3	+ 4.0	92	10†	33	2	40	3.77	− 1.86	0.80	0	9	20	2	9	s.	Prof. M. F. Troxell.
Beloit	Mitchell	1,383	16	65.8	.....	97	10	27	2	46	2.00	− 0.86	0.80	0	10	12	11	8	s.	F. A. Slack.
Blakeman	Rawlins	2,834	14	62.2	.....	97	18†	25	1	53	1.84	− 0.68	0.80	0	10	12	10	9	se.	C. L. Henderson.
Blue Rapids	Marshall	1,105	5	.....	.....	.....	.....	.....	.....	.....	0.86	.....	0.56	0	5	23	0	8	.....	M. Norton.
Centralia	Nemaha	1,256	2	66.2	.....	95	24	29	2	46	1.81	.....	0.43	0	8	15	4	12	sw.	N. S. Hazen.
Chapman	Dickinson	1,113	7	67.7	.....	96	24	30	2	44	2.02	.....	0.49	T.	5	18	8	5	s.	Dr. R. McShea.
Clay Center	Clay	1,203	10	66.6	.....	97	24	27	2	46	1.87	.....	0.60	0	4	7	9	15	s.	O. L. Slade.
Colby	Thomas	3,138	20	63.4	+ 2.8	98	9†	30[b]	3	54	1.19	− 1.08	0.67	0	7	4	15	12	s.	G. H. Kinkel.
Concordia	Cloud	1,398	27	66.3	+ 2.6	94	24	31	2	35	2.94	− 1.76	1.06	0	9	5	17	9	s.	U. S. Weather Bureau.
Densmore	Norton	2,200	2	65.4	.....	98	9	27	2	44	1.83	.....	1.40	0	6	3	20	8	s.	J. J. Griffith.
Dresden	Decatur	2,731	17	61.0	+ 1.2	97	18	26	1	52	2.12	− 0.75	1.79	T.	8	16	3	12	sw.	Jacob Bock.
Ellsworth	Ellsworth	1,537	7	65.2	.....	95	24†	26	2	49	1.46	.....	0.67	0	6	6	18	7	s.	Geo. Seitz.
Enterprise	Dickinson	1,144	9	68.4[d]	.....	97	24	31	2	41	1.37	− 3.01	0.54	T.	5	7[d]	18[d]	2[d]	s.	H. O. Wagner.
Eskridge	Wabaunsee	1,412	5	67.1	.....	92	24	31	2	40	2.04	.....	0.73	0	7	12	14	5	s.	Geo. D. West.
Farnsworth	Lane	2,850	10	65.2[c]	+ 4.2	100	9	26	1†	46	1.56	− 0.78	0.96	0	8	17	7	7	s.	C. M. Jennison.
Fort Scott	Bourbon	857	36	68.4	+ 2.8	94	24†	30	2	44	3.80	− 2.28	2.05	0	9	17	3	11	sw.	E. A. Shaver.
Frankfort	Marshall	1,146	17	67.2	+ 3.1	96	24	28	2	43	2.12	− 3.60	0.92	0	4	13	17	1	sw.	E. C. Dunham.
Garnett	Anderson	950	5	68.1	.....	90	10†	31	2	36	2.55	.....	0.56	0	9	9	20	2	s.	D. D. Judy.
Goodland	Sherman	3,087	4	62.8	.....	96	24	26	1	48	1.09	.....	0.39	0	8	14	6	11	s.	C. C. Calvert.
Gove	Gove	2,750	22	66.0	+ 4.5	100	9	28	1†	48	1.48	− 1.38	.....	0	6	13	10	8	s.	Jesse Royer.
Hanover	Washington	1,225	14	67.4	.....	96	24	28	2	39	1.34	− 4.39	0.67	T.	7	17	3	11	s.	A. Jaedicke, jr.
Harrison	Jewell	1,804	10	65.0	+ 4.1	93	9†	28	2	40	2.53	− 0.58	1.00	0	5	19	6	6	s.	Mahlon Tegley.
Hays	Ellis	2,000	43	63.8	+ 0.7	97	9	27	2	46	2.27	− 1.04	0.97	T.	11	14	6	11	sw.	G. K. Helder.
Hill City	Graham	2,134	3	65.0	.....	98	9	28	1	47	1.57	.....	1.20	0	5	17	8	6	s.	I. R. Mort.
Horton	Brown	1,188	22	65.0	+ 1.5	92	24	32	2	42	3.93	− 1.31	1.58	0	11	15	4	12	s.	Mrs. S. C. Belden.
Jewell	Jewell	1,540	6	.....	.....	.....	.....	.....	.....	.....	2.26	.....	1.13	T.	4	10	10	11	s.	C. A. Shinn.
Lawrence	Douglas	997	43	68.0	+ 3.0	92	24	34	2	32	1.42	− 3.24	0.75	0	10	7	12	12	sw.	Prof. H. P. Cady.
Leavenworth	Leavenworth	913	67	69.6	+ 5.0	94	24	36	2	38	1.67	− 2.82	0.75	0	9	22	4	5	s.	F. H. Lemon.
Lebanon	Smith	1,812	13	65.0	+ 3.8	94	24	28	2	38	1.21	− 1.90	0.72	0	2	22	0	9	s.	E. V. Bower.
Lindsborg	McPherson	1,333	5	.....	.....	.....	.....	.....	.....	.....	1.71	.....	1.00	0	3	.....	.....	.....	s.	A. J. Fredrickson.
Mankato	Jewell	1,784	2	64.2	.....	94	12†	25	1	49	3.48	.....	1.50	0	3	10	6	15	sw.	W. F. Isaac.
Minneapolis	Ottawa	1,259	21	66.6	+ 2.9	95	24	27	2	43	2.03	− 1.31	1.55	0	4	14	6	11	s.	J. L. Steele.
Moran	Allen	1,008	15	68.9	+ 3.0	93	19	32	2	37	3.06	− 1.53	1.75	0	7	13	15	3	sw.	C. J. Norton.
Natoma	Osborne	1,834	2	.....	.....	.....	.....	.....	.....	.....	0.74	.....	0.10	0	2	22	1	8	s.	C. O. Hunt.
Norton	Norton	2,284	13	64.3	+ 3.3	98	18	27	2	43	1.81	− 1.43	1.28	T.	8	7	17	7	se.	Sim Sieffel.
Oberlin	Decatur	2,539	24	.....	.....	.....	.....	.....	.....	.....	2.65	− 0.52	0.89	0	12	20	4	7	nw.	I. K. Huber.
Oketo	Marshall	1,194	3	66.2	.....	96	24	29	2	35	1.50	.....	0.88	0	7	7	15	9	sw.	J. A. Church.
Olathe	Johnson	1,032	16	69.4	+ 5.1	94	24	31	2	37	1.22	− 4.78	0.33	0	8	14	13	4	se.	Dr. S. B. S. Wilson.
Osage City	Osage	1,081	12	67.0	.....	95	24	29	2	39	2.62	− 3.15	0.85	0	8	14	3	14	s.	W. C. White.
Ottawa	Franklin	926	17	68.2	+ 3.7	93	24	32	2	38	1.67	− 3.98	0.41	0	9	18	6	7	s.	H. F. McDougal.
Phillipsburg	Phillips	1,939	20	65.6	+ 3.9	101	9†	27	2	45	1.42	− 1.45	1.12	0	5	16	9	6	se.	N. E. Bailey.
Pleasanton	Linn	862	9	67.0	.....	89	24†	31	2	33	2.76	.....	1.74	0	8	21[a]	7[a]	2[a]	sw.	B. F. Blaker.
Republic	Republic	1,495	8	.....	.....	.....	.....	.....	.....	.....	1.52	.....	0.78	0	7	.....	.....	.....	.....	J. W. Ambrose.
Russell	Russell	1,834	12	66.2	+ 2.6	102	18	24	2	47	1.70	− 1.17	1.00	0	4	14	6	11	s.	Robert Brebner.
Russell Springs	Logan		1	63.2	.....	100	24	25	1	46	0.77	.....	0.50	0	4	15[a]	10[a]	5[a]	se.	D. J. Hutto.
St. Francis	Cheyenne	3,288	3	62.3	.....	99	24†	26	1	52	0.82	.....	0.51	0	6	11	11	9	s.	J. E. Uplinger.
Salina	Saline	1,227	27	68.2	+ 3.0	98	24	27	2	43	3.18	− 1.28	1.95	T.	7	9[i]	8[i]	5[i]	s.	Prof. A. W. Jones.
Scott	Scott	2,971	5	64.9	.....	96	24	27	1†	46	1.70	.....	0.87	0	6	6	18	7	s.	J. B. Loughran.
Smith Center	Smith	1,800	1	.....	.....	.....	.....	.....	.....	.....	1.43	.....	0.75	0	4	12	11	8	se.	W. H. Nelson.

TABLE 1.—*Climatological data for May, 1911. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Kansas*—Contd.**																				
Topeka	Shawnee	997	25	68.1	+ 3.1	95	24	35	2	33	1.91	− 2.97	0.72	0	9	13	15	3	s.	U. S. Weather Bureau.
Valley Falls	Jefferson	913	12	68.0	+ 4.0	94	24	31	2	39	1.50	− 3.23	0.55	0	5	21	9	1	se.	Miss Nettie Maxwell
Vinland	Douglas	880	2	.....	.....	.....	.....	.....	.....	.....	2.35	.....	0.80	0	9	.....	.....	.....	.....	A. Schick.
Wakeeney	Trego	2,456	28	64.0	+ 1.5	99	9	27	1	45	2.37	− 0.60	1.13	0	13	17	6	8	s.	A. S. Peacock.
Wallace	Wallace	3,303	41	64.3	.....	99	24	26	1	49	0.52	− 2.11	0.37	0	4	2	22	7	sw.	M. T. Griggs.
Wamego	Pottawatomie	1,002	18	.....	.....	.....	.....	.....	.....	.....	2.37	− 2.92	0.75	0	6	13	7	11	sw.	M. L. Stone.
Missouri.																				
Amoret	Bates	850	3	69.2	.....	92	19†	31	2	36	2.07	.....	1.40	0	4	17	10	4	sw.	Darby Fruit Farm.
Appleton City	St. Clair	853	21	69.3	+ 4.2	96	26	32	2	41	0.64	− 5.59	0.20	0	6	8	23	0	s.	T. C. Brown.
Arlington	Phelps	695	22	.....	.....	.....	.....	.....	.....	.....	1.00	− 3.78	0.45	0	3	21	3	7	s.	George V. Randolph.
Arthur	Vernon	767	19	69.0	+ 4.7	94	24	30	2	40	1.89	− 4.59	0.60	0	5	16	14	1	sw.	J. T. Armstrong.
Avalon	Livingston	.....	24	67.9	+ 4.4	90	24†	34	2	34	2.47	− 2.86	0.88	0	5	22	8	1	sw.	F. G. Ashbaugh.
Bagnell	Miller	594	16	.....	.....	.....	.....	.....	.....	.....	0.35	− 4.58	0.30	0	2	21	0	10	e.	W. S. Brockman.
Bethany	Harrison	881	22	66.8	+ 4.8	91	25	34	2	31	3.13	− 2.00	1.13	0	7	22	5	4	sw.	W. H. Skinner.
Bolivar	Polk	1,070	24	67.8	+ 2.8	95	24†	27	2	44	0.87	− 4.54	0.69	0	4	20	11	0	sw.	E. Waltz.
Boonville	Cooper	600	36	.....	.....	.....	.....	.....	.....	.....	1.42	− 4.05	0.70	0	6	14	7	10	sw.	C. Randecker.
Brunswick	Chariton	652	31	69.4	+ 5.7	94	24†	35	2	42	2.16	− 5.64	1.32	0	5	12	10	9	se.	Louis Benecke.
Columbia	Boone	784	22	68.7	+ 4.2	94	24	33	2	33	1.27	− 3.59	0.58	0	7	20	7	4	s.	U. S. Weather Bureau.
Conception	Nodaway	982	28	66.5	+ 5.4	92	24	32	2	35	3.14	− 1.67	0.95	T.	7	13	12	6	s.	Fr. Adhelm Hess.
Eldorado Springs	Cedar	750	7	68.8	.....	96	24†	31	2	46	0.13	.....	0.13	0	1	22	5	4	sw.	Samuel Graham.
Fayette§	Howard	725	29	68.8	+ 4.6	92	24†	35	2	33	0.96	− 3.99	0.30	0	7	25	3	3	.....	Prof. T. Berry Smith.
Fulton	Callaway	818	21	68.4	+ 4.4	93	28	33	2	39	1.66	− 3.20	0.73	0	8	7	23	1	sw.	Dr. J. L. Brenneman.
Glasgow	Howard	618	33	.....	.....	.....	.....	.....	.....	.....	0.83	− 5.84	0.46	0	3	16	8	7	se.	J. J. Shaughnessy.
Grant City	Worth	1,130	19	67.4	.....	95	25	33	2	34	3.72	− 1.28	1.60	0	8	19[a]	6[a]	5[a]	s.	W. H. Campbell.
Harrisonville	Cass	912	40	72.0	+ 8.2	96	26	35	2	42	0.76	− 3.99	0.38	0	6	8	4	19	sw.	A. J. Sharp.
Hazelhurst	Livingston	.....	19	.....	.....	.....	.....	.....	.....	.....	4.60	− 0.49	1.31	0	11	.....	.....	.....	.....	W. H. Baker.
Hermann	Gasconade	482	37	.....	.....	.....	.....	.....	.....	.....	2.19	− 2.20	0.76	0	8	19	4	8	e.	C. T. Maushund.
Houston	Texas	1,280	19	66.9	+ 2.3	95	28	30	2	39	0.25	− 4.42	0.25	0	1	9	21	1	s.	E. Dempsey.
Jefferson City	Cole	628	30	68.2	+ 3.1	96	24†	31	2	45	1.51	− 2.78	0.92	0	8	23	0	8	s.	Miss Emma Swift.
Kansas City	Jackson	963	22	68.6	+ 4.1	92	24	36	1	28	1.10	− 4.01	0.46	0	9	12	15	4	s.	U. S. Weather Bureau.
Kidder	Caldwell	1,017	20	67.2	+ 4.7	91	8	33	2	31	4.15	− 1.93	1.20	0	13	13	11	7	sw.	J. F. Sharp.
Lamonte	Pettis	863	22	69.7	.....	94	24†	36	2	43	1.52	− 3.93	0.40	0	6	12[a]	8[a]	10[a]	sw.	Dr. W. E. Walker.
Lebanon	Laclede	1,265	23	69.6	+ 3.8	93	24†	32	2	34	0.36	− 5.72	0.20	0	3	18	10	3	s.	M. W. Serl.
Lexington	Lafayette	813	30	69.1	+ 5.1	92	24†	36	2	34	2.70	− 2.43	1.03	0	9	19	1	11	s.	J. W. Keithley.
Liberty	Clay	864	23	70.2	+ 6.2	95	24†	36	2	39	2.09	− 3.37	0.97	0	8	13	13	5	sw.	W. C. Wilmott.
Lockwood	Dade	1,088	17	66.4	.....	93	28	32	2	38	0.29	− 4.70	0.14	0	3	27[a]	1[a]	2[a]	sw.	C. S. Crow.
Marshall	Saline	779	21	68.8	+ 5.0	93	25	35	2	37	2.79	− 2.43	1.50	0	6	25	4	2	sw.	Dr. W. H. Black.
Marshfield	Webster	1,492	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. A. McCombs.
Maryville	Nodaway	1,160	22	66.4	+ 4.8	94	24	31	2	38	2.81	− 2.49	1.04	T.	11	20	2	9	s.	J. R. Brink.
Mount Vernon	Lawrence	1,480	32	68.9	+ 3.2	93	19†	29	2	44	1.74	− 3.98	1.44	0	4	22	7	2	sw.	J. R. White & Son.
Nevada	Vernon	860	18	.....	.....	.....	.....	.....	.....	.....	0.78	− 5.42	0.22	0	8	23	7	1	sw.	C. Jewell.
Oregon	Holt	1,113	56	65.2	+ 1.9	91	24†	30	2	44	4.72	− 0.12	2.06	T.	9	19	2	10	s.	Tom Curry.
Osceola	St. Clair	738	13	.....	.....	.....	.....	.....	.....	.....	0.48	− 6.48	0.15	0	6	15	9	7	.....	W. E. Matthews.
Pattonsburg	Daviess	.....	2	.....	.....	.....	.....	.....	.....	.....	3.52	.....	1.10	0	6	17	0	14	se.	Wm. Burton.
Rolla	Phelps	1,092	31	69.2	+ 5.7	92	25†	32	2	38	1.91	− 3.30	1.44	0	6	24	4	3	s.	Prof. P. J. Wilkins.
St. Charles	St. Charles	614	34	69.4	+ 8.0	94	28	31	2	35	0.94	− 3.39	0.60	0	2	23	6	2	s.	L. C. Seager.
St. Joseph	Buchanan	825	40	68.0	.....	94	24	35	2	33	5.31	+ 0.94	1.45	0	13	13	10	8	s.	U. S. Weather Bureau.
St. Louis	St. Louis City	567	40	71.4	+ 4.9	94	26	39	2	27	2.26	− 1.98	1.22	0	4	22	7	2	s.	Do.
Sublett	Adair	1,000	32	66.7	+ 4.5	90	24	32	2	38	3.40	− 2.14	1.00	0	7	16	10	5	s.	Lewis Spriggs.
Trenton	Grundy	812	17	68.2	+ 4.8	90	16	35	2	36	4.18	− 1.23	0.96	0	11	24	1	6	s.	W. H. Estes.
Unionville	Putnam	1,072	19	65.0	+ 2.2	89	27	33	2	34	5.18	− 0.79	1.85	0	11	16	5	10	s.	Geo. W. Davis.
Warrensburg	Johnson	883	32	70.0	+ 5.0	93	24	37	2	33	1.63	− 3.27	1.10	0	5	22	5	4	sw.	A. F. Smithson.
Warrenton	Warren	865	22	69.6	+ 5.0	95	28	34	2	38	1.62	− 3.29	0.63	0	6	18	7	6	s.	Dr. John H. Frick.
Warsaw	Benton	700	8	68.8[d]	.....	97	24†	31	2	44[d]	0.70	.....	0.29	0	5	23	4	4	sw.	Dr. J. R. Smith.
Wheatland	Hickory	920	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. S. A. Jackson.

[a], [b], [c], etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
† Also on other dates.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 6, Missouri Valley.*

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Arapahoe	Bighorn									.18	.90					.52				T.	.12			T.			.12	T.		.20		T.	2.04
Barnum	Powder		T.							.15						.53				.14							.62						1.44
Basin	Bighorn										.09				.01				.18	.21													0.53
Bennett	North Platte								.04		.19				.10				.18	.05	.28	T.											0.88
Big Creek	do	.05	.03								.94		.12	.10							.60												2.06
Casper	do			.30							.06			T.		.02			.03	.06	.15						.01	T.				.16	0.55
Centennial	do	T.	.03	.01			.02		T.																								
Cheyenne	South Platte	.01	.04	.02			.02				.13				T.					.01	.02						T.	.02	.03	.02		.01	0.33
Chugwater	North Platte			.02							.02										.02												0.06
Clark	Clarks Fork	T.	T.							.22						.76			T.	.02			T.	T.	.04	.01	.45	.04		T.	T.		1.54
Cody	Bighorn			T.						T.						T.			T.								T.						T.
Crazy Creek	Clarks Fork		.31	.08												.25		.02	.32	.05			.08	.03	.10	.03	.70	.05					2.02
Dome Lake	Tongue		1.50								.38				.06	.21			.25	.20	.03			.40			.10	.01					3.14
Douglas	North Platte	T.	.15							.45	.08				.03	T.				.43	.05					.01				.88		.08	2.16
Dubois	Bighorn		.20							.05					.88				.15	.15				T.			.21	.23	.17	.05			2.09
Eatons Ranch	Tongue						T.			.34	.83				T.	.87			T.	.12				T.	.11		T.			.21		.30	2.78
Echeta	Powder									.60					.25	T.				.52				T.			.10			T.	.24		1.71
Elk Mountain	North Platte		.15	.06							.30									.30	.24						.12	.02					1.19
Encampment	do		T.	T.			T.	T.			.09								T.	.07	.16						T.	T.					0.32
Ervay	do	.02							T.	T.	.76				.70				T.		.10						.10	.04		.05		T.	1.77
Fort Laramie	do			.25	T.						.15										T.	T.							.10	.03			0.53
Fox Fork	do	T.	T.								.40																						0.40
Germania	Bighorn			T.						.07	T.				T.	.58				.03	T.		T.	.09			.27			T.			1.04
Gillette	Powder										.35					.15			T.	.18	.12			T.			.02		T.	T.	.09		0.91
Horse Creek	Bighorn	.21	.21							T.	T.				.10	.75	.03	T.	.02	.26			T.	.03			.92	.72	.02				3.42
Hunters	Powder	.04	.10							.14	.34					1.21		.16	.12	.18	.11		.04	.03	.02		.08	.08					2.65
Hyattville	Bighorn										.02	.04				.04											.05						0.15
Jireh	Niobrara		.28	.02							.29				.15	T.				T.	.15								.01	.39		.01	1.30
Kirtley	do			.14							.27					.03					.10						.16		.07		.30		1.07
Knowles	B. Fourche										.50						.16		.13	.13							.20				.28		1.40
Lagrange	North Platte	.06	.15	.14	.03	.05					.48			T.	.05					.04									.02	.04			1.06
Lander	Bighorn									.01	.05				.28				T.	.02						T.	.41	.05		.10		.01	0.93
Laramie	North Platte	T.	.04								.08								.02	.02	.06							.08				T.	3.00
Leo	do		.02								.30									.03	.43							T.				T.	0.78
Lolabama Ranch	Bighorn																																
Lovell	do									.06						.43			T.	T.							.65						1.14
Lusk	Niobrara									.80					.16															.56			1.52
Manville	do		.19	.05	.02						.34					.12					.07						T.		.02	.50		.01	1.32
Moore	North Platte	.08									.01									T.	.05							T.	T.			T.	0.14
Newcastle	Cheyenne								T.		.18			T.					T.	.12						T.					.14	.21	0.65
Pathfinder	North Platte		.05	.06	T.						.85					.02			.06	.01	.20					T.							1.25
Phillips	do		T.											T.							T.					T.			T.				T.
Pine Bluff	South Platte	.11		.29							.16										.18									.20	T.	.15	.33	1.42
Powell	Bighorn		.04							.17						.36											.23						0.80
Rawlins	North Platte	T.	T.	T.				T.			.34				T.	.17			.02	.02	.17						T.	.02				T.	0.74
Saratoga	do		T.	T.							.06			T.		.01			.10	.01	.10												0.28
Sheridan	Tongue		.02				T.			.17	.24				.14	.38			.02	.14	.02		T.	T.	T.	.01	.02			.05		.01	1.22
Shoshone Dam	Bighorn		.04							.13						.28			.05				T.				.08					.05	0.63
Soldiers Home	Powder		.43							.14	.66					.52	.61				.06												2.42
South Pass City	North Platte	T.	T.							T.	.13				T.	.30			.07	.01	T.						.45	.15	T.	.11		T.	1.22
Thermopolis	Bighorn		.01							.07	.28				.09	.29					.05						.57	.02					1.38
Upton	Cheyenne																																
Valley	Bighorn		.13													.50			.19								.82	.12		.02			1.78
Verona	Tongue									.53					.30				.13	.40	.14			.09		.09	.04		.18			.32	2.22
Wiants Ranch	North Platte	T.		.05			.01				.26			T.	.04				.06	.10	.41					T.	T.						0.93
Wood Rock	Tongue		.27				.13			.20	.58	.12			T.	.75	.02	T.	.45	.35	1.30		.08				.35		T.	.06	.08		4.74
Worland	Bighorn									.05	.17				.07	.53			T.	.01				T.			.33						1.16
Wyncote	North Platte		.12	.09							.21				T.						T.						.15	.05	.08	.14			0.84
Yellowstone Park	Yellowstone		.30				T.		.10	T.	T.				.05	.22	.19	.14	.16	.01			T.	.25	.29	.03	.45		T.				2.19
(1) Fountain	Madison		.35								.24					.19	.31	.33	.45					.10	.11		1.05						2.48
(2) Gallatin	do	.11	.04		.01							.13					.10	.16						.20			.20						0.75
(3) Grand Canyon	Yellowstone		.23	.12						.13							.15	.29	.63	.06			.06	.08	.09		.35						2.19
(4) Lake Yellowstone.	do		.37							.29							.10	.15	.55														1.46
(5) Norris	do	.04	.30	.03			T.			.25						.25	.10	.50	.32	T.			.08	T.	.05		1.00						2.92
(6) Riverside	Madison		.03																				.02	.07									0.12
(7) Fairview Dome.	Yellowstone		.20	T.						.10								.10	.15						.80	.20	T.						1.55
(8) Sylvan Pass	Bighorn	T.	.50	.62						.14	T.	T.			T.	.26	.26	.19	.85	.22			.09				.64	.05					3.82
(9) Thumb	Yellowstone		.23																.65				T.	T.	T.	T.	.45						1.33
(10) Tower Falls	do		T.				T.				T.				T.		.04	.02	.05	T.				T.	.02		T.						0.13
(11) Upper Geyser Basin.	Madison		.30						T.	.10					.10		.40		.70	T.				.20	.05	T.	.50						2.35
Montana.																																	
Adel	Missouri			T.					.08	.04	.04			.13	.20	.72	T.	.15		.18		T.	.03	.10	.30	.90	.95	.12	.28				4.22
Agricultural College	Gallatin																																
Augusta	Sun									T.				T.	.44	2.00									.01	.19	.24	.06					2.99
Babb	Milk						T.						T.	.75	.84	.10	.43		.06				.25	.06	.57	.05	.29	.03		.01			3.44
Bald Butte	Missouri	T.					T.		.30							1.18	.07	.12	.08				T.	.18	.04	.20	.50	.02					2.69
Bigtimber	Yellowstone									.12	.14					1.10								.40	.76	.50	.99						4.01
Bigtimber Creek	do		.11						.03	.38	.12				.02	1.35			T.	T.		.25	.63	1.37	.70	.38			.04	T.			5.44
Billings	do									.31	.23					.40				.05	.03		.35	.08	.04	.04	1.52	.04			.15		3.24
Blackleaf	Missouri									.20				.44	.48	2.40	.17						T.	.02	.35	.24	.70	.10	T.				5.10
Bloomfield	Yellowstone											T.		T.		.70	.62	T.	.07	T.			T.		.24	T.	1.70	.07		.18			3.58
Boulder Nursery	Jefferson	T.	.12	T.					.05	.04						.56	.03	.16		.03			.08	.28	.15	.21	.61	.05		.10			2.47
Bowen	do		.04	.04												.50		.26	.10	.11				.18			.05	.06					1.34
Bridger	Yellowstone									.32	.07			T.					.08							.03	1.31						1.81
Broadview	do									.30	.05					.45						.10		.10	.30	.15	1.00			.20			2.65
Busby	do									.07		T.				.45	.07			.13	.43		.24				.58	.06		.08	.03		2.14
Busteed	do			.03						.15	.02					.72				.23	.02		.08	.40	.21	.26	1.07	T.		.07			3.26
Cabin Creek	Jefferson	T.	T.							.02					.05	.65			.05				.03	.02	.44	.23	T.		.22				1.71
Canyon Ferry	Missouri			.03					.09					.01	T.	.40	.07	.34	T.	.13			.01	.24	.07	.35							1.74
Cascade	do			T.	T.	T.			.05	T.	T.	T.		.06	.14	.67	T.			.01			T.	.15	.36	.56	.37	.01	.02				2.40
Chessman Reservoir	do		T.				T.		.10					.15	.03	.70	.18	.20	.12	.05			.06	.30	.17	.40	.88	.10	T.				3.44
Chester	do										T.				T.	.52	.40			T.			.22	.06	.06	.46	.05	.01					1.78
Chinook	Milk									.02				.32	.39	.35	.20							.18	.02	.70	.02						2.20
Chouteau	Missouri																																
Clearcreek	Milk															.58	.31		.02					.39	.11	.91	.23						2.48
Clemons	Missouri													.10	.24	1.75	T.							.13	.24	.19	.60	.05					3.30
Clydepark	Yellowstone			.05					.04	.32					.05	.36			.06		T.		.05	.50	.50	.70	.94						3.57
Conrad	Marias									.05					.45	.10	.85	.03		.27			.02		.02	.29	.25	T.					2.33

TABLE 2.—*Daily precipitation for May, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Montana—Contd.																																	
Copper	Musselshell		T.	.05	T.				.09	T.	.01			T.	.07	.77	T.		T.	.25			.21	.50	.43	.45	.20	.01	T.	.14			3.18
Crow Agency	Bighorn																																
Culbertson	Missouri																																
Cummings	Bighorn									.32	T.					.34	1.00		T.	.05	.03			.67		T.	1.65	.08					3.88
Cut Bank	Marias									.12	T.	.10		.45	.36	.64				.45			.08		T.		.62	.05					2.16
Decker	Tongue															1.36	.17						.26		.06	.26	.12	T.	.21				3.47
Denton	Missouri			T.					T.		T.	T.																					
Dillon	Jefferson	T.	.05			T.	.01		.11	.70				T.	.03	.57	.33	T.	T.	.20	T.		T.	.10	.04	.70	.51	.02	T.	.11			2.58
Dirty Creek	Musselshell	.00		.05						.23	.05			.15		.49	.03		.01				.04	.22	.71	.59	.17	.12				T.	3.26
Dry Creek	Missouri			.04	.01		T.		T.	.04	T.			.01	.14	.90		.05			.08		.18	.43	.61	1.11	.13			.05			4.08
Dry Wolf Camp	do			.02					.02	.03		.04		.04	.07	.54	.01	.02	.09	.06			.01	.26	.44	.58	.31	T.	T.				2.56
East Gallatin River	Gallatin			.07						.29					1.25					.19			.35	.23	.11	.30	.60	.02		.01			3.28
Ekalaka	Lt. Missouri															.54			.08	.08	.01		.03	.32	.63	.94	.78	.02					3.79
Elkhorn	Jefferson	T.	.25	.07			.03		.04	T.	.02				.08	.05	.65			.12							.09	.05	.12	.09			1.25
Evans	Missouri															.78	.04	.11	.09	.05			.05	.25	.15	.35	.24	.10	.11	.06			2.84
Fallon	Yellowstone						T.					.05																					
Fish Creek	Jefferson	T.	.28	T.			T.		.30	.10					.08	.78	.50	T.	.16		T.		T.	.37		.05	1.90	.05		.20			3.69
Flathead Creek	Yellowstone			T.						.12	T.					.68	T.		.32	T.				.37			1.60	T.	.12	.08			3.93
Forsyth	do															.62	.09						*	*	1.10	.92	.52	.09					3.46
Fort Benton	Missouri																.70							.20		.10	.50			.10			1.60
Fort Shaw	Sun															.10	.46	.15						.25	.35	.45	.30			T.			2.06
Foster	Bighorn									T.	.11				.34	.68									.15	.35	.05						1.57
Garneill	Musselshell			.10	.25				.60		.50			.15	.75	.54			T.	T.	T.		.05	T.				.62	.06		.08	.30		1.76
Glasgow	Milk																.95	*	.95					1.10	.95	1.10	1.10			.20		.20	8.90
Glendive	Yellowstone															.46	.13		.05					.12	.23	.22		.88					2.09
Goldbutte	Marias		T.						.05		.03	.05			.03	.95	.60	T.	.16	.02		T.		.03		2.00	.35	.02		.17			4.35
Graham	Powder									T.	T.					.42	.46						.16	.01	.03	.27	.09	.10	.05				1.70
Grayling	Madison		.18	.04						.12						.30			.05	.18					*	*	*	*	*	.50			1.03
Great Falls	Missouri		T.						.18	.12	.09			.01	.31	.34	.14	.34	.31					.43	.39		.29		.07				2.65
Halfmoon Pass	Musselshell	.20		.20						.80	.25	.10				.64	.12	.04		.14		T.	.17	.11	.06	.52	.15	.17					2.83
Halfway House	Missouri									.11						2.00	.30		.25	.85	1.10		.10	1.10	1.00	1.70	1.10	.60	T.	.10			11.75
Harlowton	Musselshell									.36					.25	.37	.13	.11	.13	.15			.30	.17	.40	.63	.10	.05		.07			2.97
Havre	Milk			T.					T.	T.	T.	T.		T.	1.34	T.	.31	.18	T.	.03	T.	T.	T.	.15	.44	.48	.94	.12		.45			4.13
Helena	Missouri		.01	.01			T.		.15					.03	.05	.70	.03	.16	T.	.04				.15		.04	.74	T.		T.			1.45
Highwood	do								.04	.01	T.			.02	.08	1.35		.10		.20		T.	T.	.30	.30	.40	.80	.05					2.07
Huntley	Yellowstone									.19	.40					.46			.12	.10	.08		.11	.13			1.96	.05					3.65
Jones Canyon	Gallatin	.11	.72	.12					1.44						.33	.64	T.		.21	.11		T.	T.	.75	.67	1.46	.12	T.					3.60
Jordan	Missouri																																6.68
Knobles Ranch	Milk		T.						.05		.01		.01		.29	.80	.25		T.	.19			T.	.10	.20	.18	.22	.08					
Lewistown	Missouri			T.						.34	T.			.11	.02	.82	.47		.02	.24	.34		.02	.55	.44	.82	.77	.07	.07	.08			2.38
Livingston	Yellowstone																																5.18
Lonetree	Missouri										.03				.14	.90	.05			.32			.08	.12	.10	.68	.82	.08	.05	.05			3.42
Malta	Milk								T.	.30		.02				.40	.34			T.		.01	T.	.35	.02	.60	.71	.25	.09				3.09
Medicine Lake	Missouri															.10	.66							.11	.28	.02	1.31	.05	.07				2.60
Melstone	Musselshell								.10							.27	.70	1.25					.10				1.00	.40		.15		.21	4.18
Mildred	Yellowstone						T.			T.						.48	1.13	T.	.13	T.			.02	.02		.45	.91	.02	T.	.27			3.43
Miles City	do						T.				.01		T.		.08	.02	T.	T.	T.				T.	T.		.12	.25			.26			0.74
Norris	Madison									.43	.37				.02		.01		.04	.04			.05	.24	.47	.90	1.60	.03					4.20
Nye	Yellowstone	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	.55		.03	.24	.41	.33	1.15	.05					2.76
Olsen Creek	Jefferson	.10							.16	.01						.60	.05	.15	.12	.21					.27	.33	.37	.46			T.			2.23
Pipestone Pass	do		.19		.08				.15	.09				T.	.02	.54			.20		.10			.02	.50	.24	.04						2.20
Poplar	Missouri											.08				.13	.30		T.	T.				.11	.30	T.	1.25	.20					2.80
Red Lodge	Yellowstone	T.	T.	T.						.48	.07					1.87									.37	.19	1.26	.03					2.37
Renova	Jefferson		T.	.08			T.		.06	.06						.51	.01		.05				T.	.10	.30	.40	.17						4.35
Ryegate	Musselshell									.46	.16					.75							.25	.15	.85	.50	1.55	.03		.15		T.	1.74
Seville	Marias										.05			.25	.45	1.14							.11	.01	.11	.47		.03					4.85
Sidney	Yellowstone										T.	T.			.28	.22	.40		T.	.05	T.			T.	.07	T.	1.94	.05		.12			2.62
Spokane Ranch	Missouri			T.							.08						.04	.58	.01	.25	.07			.26	.04	.23	.04	T.	.02				3.13
Springbrook	Yellowstone									T.	T.	.02				.04	.40	T.	T.	T.	T.		T.	T.	.25	.01	1.46	.13		T.			1.62
Stearns	Missouri													1.65		.28									.54	.15	.80						2.31
Three Forks	Madison		.02	.02						.37	.04														.13	.60	.33	.09			.01			3.14
Tokna	Yellowstone																																1.89
Trail Creek	do			.30						.50					.29	.15			.20	.14			.20	.24	.54	.60	.74		.07				3.97
Twete	Milk								.03		.06			.38		.36	.30						25			.60	.15		.10				2.23
Utica	Missouri								.03	.02	.03	.03		.01	.05	1.37		T.		.22			.11		.60	.80	.66	.04		.08			4.05
Valentine	Musselshell									.23		T.				1.07	.27		T.	T.			T.	.15	.59		1.87	.29	.04				4.51
Virginia City	Jefferson		.05	T.						.22	.22					.29	T.		.09	.10			T.	.19	.39	.59	.03						2.17
Wall Rock Mount'n	Missouri			.02										.05	.40	.53		.02	.21	.10				.30	.70	.72	.32			.03			3.40
Warm Springs C'k	Madison																																
Wilder	Missouri									.27	T.					1.38	.34				.02			.03	.36	.95	.88	.17	T.	.01			4.41
Wolf Creek	do				.02				.08					.08	.20	.56	.03	.08	.02	.03				.30	.23	.40	.45	.05	.04				2.57
Woodville	Jefferson		.02						.03	.02				T.		.30	.01	.11	.08	.14				.22		.32	.04	T.	.02				1.31
North Dakota.																																	
Aplin	Knife														T.	.19	.02		.01	T.	.07				.01		.11	T.		.32	.27		1.00
Beach	Lt. Missouri															1.18	.74		.13					T.			.36	.05	.11	.28	.01		2.86
Belfield	Heart											.03	.01			1.23	.47			.09	.02						.33	.02		.04	.47		2.71
Berthold Agency	Missouri						.01			T.						.06		.09	.08							T.	.85	T.	.01	.55	.04		1.69
Bismarck	do						T.	.04			.03			.05	.07	.50	T.		.04	T.					.09		.01			.17	.18		1.18
Broncho	Knife															.56											.73	.03		.35			1.67
Buford	Missouri						T.			.01		.02			T.	.08	.90		.05	.05	.03			T.	.12	T.	1.21	.05		.12			2.64
Dickinson	Heart						T.	T.		T.		T.			.04	.45	.16		.05	.02	.01					T.	.54	.02	T.	.29	.05		1.63
Edgeley	James							.01			.19	.30				.98	.07										.32	.29			.15		2.31
Epping	Missouri															.40	1.34		T.	.08			T.	.08	.10		1.40	.10		.08			3.58
Fullerton	James							.09		.85	.56	.38			.76	.34				.03			.04	T.				.52		T.	.12		3.69
Garrison	Missouri			*						T.						.40	.21		.07	T.							.32	.03		.33	T.		1.36
Haley	Grand									T.	.05	T.		T.	T.	.37	.43		T.						.02		.55	T.	.01	T.			1.43
Hettinger	Cannon Ball									.04	T.					.39											T.						0.43
Howard	Missouri	T.					T.									.80	1.10		T.	.01			T.	T.	.17	T.	1.50	.17					3.75
Jamestown	James							.12		.40	.90				1.10				.10								.50			.10	.70		3.92
Lamoine	Missouri																																
McHenry	James																																
Manfred	Sheyenne																																
Marmarth	Lt. Missouri								.41	.22	.05		.05		.42	.27		.10									.25				.43		2.20
Marstonmoor	James										.02				.28	1.28		.07	.01						T.		.40	.04	.12	.14			2.36
Medora	Lt. Missouri									T.	.43	.23		T.	.80	T.	T.		T.	T.							.43	.10		T.	.77		2.76
Melville	James														*	2.35											.18	T.		.52			3.05
Mott	Cannon Ball									1.33	.67			.15		.20		1.38									.42				.81		4.96
Napoleon	Missouri									T.	.03	T.				.23	.06		T.	.03			.10		T.		.03			.04			0.52
New England	Cannon Ball								.54		.32			.15	.13	.08											.16			.25	.12		1.75
New Rockford	James															.25											.07			.10			1.02
New Salem	Heart		.01				T.		.70	.90				.12		.31	.04	.08	.07								.89			.19	.72		4.02
Orange	Cannon Ball						.40				T.			T.	.21	.37	T.		.03	T.	.03			.15				.04			.22	.03		1.09
																	.20										.18	T.					0.78

TABLE 2.—*Daily precipitation for May, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
North Dakota—Con.																															
Schafer	Lt. Missouri																														
Steele	Missouri																														
Washburn	do									T.	T.					2.10	.10		T.						T.		.35			.90			3.45
Williston	do						.01			.01						.24	1.02	.01	.03	.02	.01			.05	.06	.30	1.00	.01		.04	T.		2.81
South Dakota.																															
Aberdeen‖	James							.10		.10	.10	.80				.10	T.			.10			.20	T.			.10	1.35			1.28		4.23
Academy	Missouri										.18			.06		.13				T.	.23	.10	.56				.35	.57	.03		.14		2.35
Alexandria	James																					.20					.70				.25		1.15
Ardmore‖	Cheyenne																																
Armour	Missouri	.20									.05					.10						.80	.08					1.50			.80		3.53
Bellefourche	Cheyenne										.30					.10			.11								.04				.13		0.68
Brookings	Big Sioux	.10													.50	.26				.28	.09	.23					T.	.17		.01	.17		1.90
Camp Crook	Lt. Missouri												.01			.07	.13			.04							.27		.05	T.			0.57
Canton	Big Sioux	1.10									.10	.12	.11	.19									.20					.08					1.90
Cascade Springs	Cheyenne								.03		.30			T.		T.											.21		T.	1.37			1.91
Castlewood	Big Sioux	T.						T.			.02	T.			.34	.22				.01		.01	.05	.06	.11		T.	.44	T.		.55		1.81
Centerville	Missouri		.22				T.				T.		T.		.14	.09		.01				T.	.26	.21				.09			.09		1.11
Clark	James							T.		T.	.32	T.			.05	.28				.04		T.		.50			T.	.72		.77			2.68
Cottonwood	Missouri						T.				.20					T.				T.	.15						.10	T.		.60	.05		1.10
Daviston	Grand									T.	T.					.40																	0.40
Deadwood	Cheyenne			.10							.30					.10				T.	.40						.10	.10			.20		1.30
Deerfield	do	T.							T.		.08			T.		.14				.08	.02			.04			.04		.02	T.		T.	0.42
De Smet	James										T.	T.		.70		.10						T.	.10	T.			1.50				.30		2.70
Dowling	Cheyenne						.10				.20										.10	.05					.15	T.		.10	.05		0.75
Dumont	do			.05		.05					.21									.08	.30	.08					.11		.04	.15		.05	1.12
Eales	Missouri							.03		.29	.14	.01				T.				T.		.02		T.		.05	.27			.03	.24		1.08
Elk Mountain	Cheyenne										.19										T.	.03							.04	.15		T.	0.41
Elk Point	Missouri	1.03														.06		.09				.14	.54					.13	.14				2.13
Ellingson	Grand															.49											.20						0.69
Englewood	Cheyenne		T.																	.03	.05	.04				.02	.05	.04			.05		0.28
Eureka	Missouri							.02			.14	.22			T.					T.	.03	.01				.03	.10	.33		T.	.03		0.97
Fairfax	do																																
Faulkton	James							.03		.22	.32									T.	.02		.08					.63			1.11		2.41
Flandreau	Big Sioux	.25														.24				.50		.02				.25					.13		1.39
Forestburg	James										.15			.05		T.					.18	.29	.10				.90		T.		.10		1.77
Frederick‖	do						.10		.05		.45					.18							.13				1.02			.27			2.20
Gannvalley	Missouri										.30			.93		.10					.42		.20				.75				.28		2.98
Greenmont	Cheyenne										.30									.20	.40	.50						.10			.90		2.40
Greenwood	Missouri										T.												1.64				.35		T.		.22		2.21
Hardy Ranger Sta.	Cheyenne										.47									.20	.50	T.				.06		.06		.17		.57	2.03
Harveys Ranch	do												.05		T.	.15				.20	.10	T.					T.		.06		.22	.32	1.10
Hermosa	do							.01			T.					.05												.05		.33			0.44
Highmore	Missouri										.08				.17						.09		.25				.04				1.28		1.91
Hopewell	Cheyenne										.20												.15				.35			.46			1.16
Howard	James							T.			.05				1.64	.06					.15	T.	.15	.08			T.	.57		T.	.37		3.07
Howell	do							T.		T.	.18	.02		T.		T.				.01	T.	.10		.30			.75	.35		T.	1.11		2.82
Huron	do							T.			.40	T.		.75		.03				T.	T.	.03	.01	.39		T.	.83		T.		.53		2.97
Ipswich	do								T.	.43														T.		T.	.35	.20		T.	.68	T.	1.66
Kadoka	White							.08		T.	.28					T.					.06	.07		.03			.13			.13	1.00		1.78
Kennebec	Missouri										.18										.13			.37			.75				.60		2.03
Kidder	James									.75	.25	.80				.68				T.	T.			T.			1.05						3.53
Kimball	Missouri										.17			.29	.11					T.		.50	.07	.37			.32	.55			.15		2.53
La Delle	James							T.		T.	.30	.25			.10	.08					T.			.20				.90			.52		2.35
Lead	Cheyenne										.30				.05					.09	.13	.03					.06	.03		.15			0.84
Lemmon	Grand																																
Marion	Missouri	.78														.09					.04	T.	.17	.16				.36			.24		1.84
Marston	do										.17										.07			.24			.63						1.11
Mellette	James							T.		.52	.28	.25				T.				T.	T.			.37		T.	.19	.81			.87		3.29
Menno	do	.90									T.					.02							.33	.02			.25				.39		1.91
Milbank‖	Minnesota											.07				.05	.45			T.				.09	.31			.09			.46		1.52
Mitchell‖	James										.15				T.		.10						.30				1.10				.40		2.05
Mobridge	Missouri																																
Murdo	White							.07			.30											.35								1.00		1.72
Oelrichs	Cheyenne																			T.									T.	.97			0.97
Orman	do										.24					.22				.05							.07				.18		0.76
Ottumwa	Missouri																																
Pierre	do							T.		.01	.13			.22							.05	.01		.15		T.	.05	.37			.50	.17		1.66
Plankinton	James										.15			.22		.07							.17	1.19			1.01		T.	.20	T.		3.01
Pollock	Missouri										.10			.12	.43										T.			.20		T.	T.		0.85
Rapid City	Cheyenne						T.		.03	T.	.19					.06				.07	T.			.01			T.		T.	.05	.08	.01	0.50
Redfield‖	James											.33												.03				.75			.09		1.80
Rochford	Cheyenne										.10				.10					.10	.01			.08			T.		.05	.03		.18	0.65
Rosebud	White																																
Rosebud Agency	do										.03										.12		.70				.30				.20		1.35
Roslyn	Big Sioux							.05		.60	.03	.63		.03		.35					T.	.05	T.				.30	.20			.61		2.85
Selby	Missouri										.11									*	.05	.10		T.	.05		.10	.40		.04			0.85
Sioux Falls	Big Sioux	.24									T.			.05		.10		T.					.60					T.			.12		1.11
Spearfish	Cheyenne																																
Stephan	Missouri										T.			.70		T.				T.	T.	T.		.40		T.	.45				.60		2.15
Tama	Cheyenne																																
Tyndall	Missouri	.73														.09				.05			.18	.09	.03		.25				.33		2.35
Vale	Cheyenne										T.					.04				T.						T.	T.		T.	T.			0.04
Vermilion	Missouri	.26													.08			.02					.81					.08	.02		.08		1.35
Waters Ranch	Cheyenne										.36					.04					.06			.01			.02			.30	.06	0.85
Watertown	Big Sioux							T.			T.	T.			.26	.12						T.	.40				.26	.50			.60		2.14
Wentworth	do	.05													.08	.32				.44		.30	.11					.20			.22		1.62
White Lake	Missouri										.20				1.19	.14					.18		.62					.78	T.				3.11
Winner	White										.13												.61					.42			.19		1.35
Yankton	Missouri			T.				T.								.03		.03	T.			1.03					.14	.02			.17		1.42
Minnesota.																																	
Pipestone	Big Sioux	.3												.15		.21					.23		.20					.08				.25	1.42
Colorado.																																	
Akron	Republican				.05	T.						T.			T.							.09	T.						.68	.11			0.93
Albion Lake	South Platte																																
Alma	do																																
Arriba (near)	Republican				T.	T.			.02		.02					.05				T.	T.	T.					T.		.84	.07	T.	.05	1.05
Auldhurst	South Platte						T.	.12								.15	.17			T.	T.	.30									T.	.04	0.78
Boulder	do	.02	.01								.12			.05							.20	.05							.30	.15			0.90

TABLE 2.—*Daily precipitation for May, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado—Contd.																																	
Burlington	Republican				.02	.06					.02			.25															.50	.05			0.90
Cassells	South Platte							.04							.20					.12		.06					.01		.09	.03		.07	0.62
Castle Rock	do															.18					.46							T.	.05			0.69
Cheesman	do	T.					T.				T.				.10	.15				T.	.35	.45	T.							T.		T.	1.05
Cheyenne Wells	Smoky Hill				.04	.04								T.						T.	T.					23	.07		.15	.32	.12		0.97
Cope	Republican					.12	.10																						2.00	.10			2.32
Corona	South Platte	.19		.47								.11								.98	.19	.20											2.14
Denver	do			T.	T.		.01	T.			.04				.05						.22								.04	.13		.03	0.52
Edgewater	do			T.	T.		.06	T.			.02				.06					T.	.26								.12	.10		T.	0.62
Estes Park Fish H'y	do		T.	T.				T.		T.	T.				T.						.20								.05			T.	0.25
Fort Collins	do		.05				T.	.03			.05				T.					T.	.05								.10	.21		.23	0.72
Fort Lupton	do																																
Fort Morgan	do																																
Frances	do	.05		.02				.02							.01					.01	T.										.10	0.21
Frys Ranch	do		.11								T.									.23	.10	.06				.05					T.	0.55
Georgetown	do	.01	T.	T.							T.				.27				.18	T.	.09						.06	.32	.02		.05	1.00
Greeley	do		T.				T.		T.		.28				.12						.08						*	*	.83		T.	1.31
Hartsel	do						T.							T.	.48	.15													.02		.01	0.66
Hawthorne	do														T.						.14	T.						.32			.09	0.55
Holyoke (near)	do				T.		.03				T.																.10	.52	.14			0.79
Idaho Springs	do	T.									T.				.11					.08	T.	.05					.12	.35	.04		.04	0.79
Keota	do		T.	.02			T.				.25										T.							.76	.60			1.63
La Porte	do										.05										.15							.19	.36		1.10	1.85
Leroy (near)	do			.06	T.	T.	.12				.24				.02					T.	T.							.93	.37	T.		1.74
Longmont	do						.02			.12					.07					.06	.22						.04	.23	.02		.22	1.00
Longs Peak (near)	do														.15					.20	.10							.18	.10			0.73
Lula Pass	do																																
Moraine Park	do														T.						T.	T.							T.		T.	
Platte Canon	do																				.07	.16						.06	.04			0.33
St. Cloud	do	T.	T.	T.											T.					T.	T.						T.	.10	.15			0.25
Sedgwick	do					T.		.10			.20					.10					.06							.36	.65			1.47
Sill Mine	do					T.		.28	.10						.40	.10				.30		.30					T.	.23	T.		.03	1.74
Spicer (near)	North Platte																																
Sterling	South Platte										.18					.01												.52	1.28			1.99
Waterdale	do		T.								.14										.19							.11	.24		.08	0.76
Wray	Republican		.06			.06					.03										.03						2.23	.09				2.50
Yuma	do		.08				T.																					.94				1.02
Nebraska.																																	
Ainsworth	Niobrara										.25			.16						T.	.09	.49	.04	.73		3.50		T.	T.	.24		5.50
Albion	Loup	.23		.04										.39								1.21	.01			.12			.38				2.38
Alliance	North Platte		.40	T.	T.	T.		.15			.35																			T.			0.90
Alma	Republican			.28											.24							1.03	.04				.02						1.61
Anoka	Niobrara										.05					.05					T.	.20	1.05					.02		.13		1.50
Ashland	Platte	.13		.26			.10		.91				T.	T.	1.51	T.					.33	.87	.12				.03	.40	.02				4.68
Atkinson ||	Elkhorn																				T.	T.	1.20	.18				.20	T.	.10		1.68
Auburn ||	Lt. Nemaha	.06		.28	.10							T.			.20	.60					.02	.51	.33	.06				.10	.04		.24	2.54
Beatrice	Blue	.08		.31			.08		.15													.96	.19	.07			.01	T.	.02		.17	2.04
Beaver City	Republican			.16					.09					.03								1.42	.16			T.	.03	.17	T.			2.06
Bellevue	Missouri	.20							.49					.24	.52						T.	1.50	.08	.03			.10	.93		.20		4.29
Blair	do	.11		T.						T.	T.		T.		.99	T.				T.	.22	1.19	.65				.04	.55				3.75
Bloomfield	do															T.		T.			T.	1.20				.20		T.				1.40
Bridgeport	North Platte		T.	T.	T.	T.	T.				.30																	T.	T.			0.30
Broken Bow ||	Loup	.70		.65																			2.20			.02	.42	T.	.05			4.04
Burge	Niobrara			T.	T.	T.	.60																.60			1.10						2.30
Callaway	Loup			.50								T.								1.65	.30					.16						2.61
Cambridge	Republican			.10	T.	T.		T.	T.					T.								1.03	.40			.05	.06	T.	T.			1.64
Canton (near)	North Platte		T.	.15	T.	T.	.07				.36					.05					T.					T.	.05	.04	.04			0.76
Columbus ||	Loup	.35		T.			.05								3.43							.97	.52	T.			.20					5.51
Creighton	Missouri																.08		.01			.90					.09					1.08
Crete	Blue			.63				.93							.64	T.						1.20	.10				.04	.93	.02			4.49
Culbertson ||	Republican	.10		.07	T.	.08			.20							.02						T.	1.53	.10			.15		.01			2.26
Curtis	do	.41	.11	T.	T.	T.		.13			T.			T.	T.	T.				T.	T.	1.10	1.24				.47	.98	.07	.93	T.		4.54
David City	Blue	.30		.18	.06																	2.57	.33					.20				3.64
Dawson	Gt. Nemaha																																
Elsie ||	Republican	T.			.03	.01	.03	.01				.03				.10							.67	.07			.44		.70	.25	.01		2.35
Ewing ||	Elkhorn			.03														.40				1.04					.03	.17	T.			1.67
Fairbury ||	Blue		.42	.08				.22						.15		T.				.85	T.	.15				T.	.05	.06		.05		2.03
Fairmont ||	do	.20		.30	.04				.18	.02					.28							.35	.57	.23				.03				2.20
Fort Robinson ||	Niobrara	.12		.40				.05			.33	.27	.22									.03					.10	.06	.02	.12		1.72
Franklin	Republican		T.	.42										.22								.99				T.		T.				1.63
Fremont	Platte														.63					.08		1.69	.24					.44				3.08
Fullerton	Loup	.20													4.10					.17		1.79	.27					.71				7.33
Geneva	Blue	.03	T.	.42					.44						.47					T.		1.00	.20				T.	.07		.07		2.70
Genoa	Loup	.10		.13										2.70		T.						1.80	T.				T.	.55				5.28
Gordon	Niobrara							.20			.23																						0.43
Gosper	Republican			.33				.04			T.											1.61					.05		.08		.02		2.13
Gothenburg	Platte	T.	.04	.20	T.			.12							T.					T.	T.	.70	.85				.25	.24	.10	.03			2.53
Grand Island ||	do	.38		.63																		.48	.92					.30	T.			2.71
Grant	Republican		T.		.01	.06					.06												.50				.08		1.15				1.86
Greeley	Loup			.14				.05						1.90								1.42						.11		T.		3.62
Halsey	do	.04	T.	.57	T.	T.					.15			T.						.12	.11	.57	.02	.01		.28	.34	.23	.05	.04		2.53
Hartington	Missouri	1.20														T.		.34			T.	1.10					.08			.05		2.77
Harvard ||	Blue	.19		.45										.18							1.00	.01					.05					1.88
Hastings ||	do	.12		.35											.16						.60	.43						T.				1.66
Hayes Center	Republican					.02		.04			.05					.02				T.	.05	*	1.50			.10			.32				2.10
Hay Springs	Niobrara		.28				.30				.50				T.				T.	.09	T.			.02		.28	.12	T.	T.	.34			1.93
Hebron	Blue	.07		.55					.01						.51	T.						.75	.30					.05	T.		.17		2.41
Hemingford ||	Niobrara	.06		.27	.01			.29				.36				.05																	1.15
Hillside	North Platte		.04	T.		.02	.03	.08			.13												.30			.11		.40	.30				1.41
Holdrege ||	Republican	.03		.50																		.50	1.50				.06	.03					2.62
Hooper	Elkhorn	T.													1.20					.25		1.87	.23					.15					3.70
Imperial	Republican							.05			T.			T.						T.	T.	T.	.60			.10		1.42	.02				2.19
Kearney	Platte		.07	.50																		.80	.08										1.45
Kimball	South Platte		T.	.09			T.				.18									T.	T.						.11		.11	T.			0.49
Kirkwood	Niobrara										.05					T.			.22			1.15				2.00		.08		.12		3.62
Kowanda ||	North Platte		.07				.12				.25										.13						.25	.35					1.17
Lexington	Platte			.38				.08							.40							.90	.25				.09	.09					2.19
Lincoln	do	T.		.22			.02	.58	.07	T.				.46	.53	T.					.16	1.07	.01				.35	.48					3.95
Lodgepole	South Platte			.12			.04				.48																	.31	.36				1.31
Loup	Loup							T.						.10			.10					1.75	.17					.15		.17			2.44

TABLE 2.—*Daily precipitation for May, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Nebraska—Contd.																																	
Loyal	Loup			.34	.40			T.	T.											T.	T.	*	2.35				.21						3.30
McCook	Republican																					1.10						.15					1.25
Madison	Elkhorn	T.		.14											.14							1.48	.05						.52				2.33
Marquette	Platte	.05		.60	T.										.02	T.	T.				T.	1.52	.18						.21				2.58
Mason City	Loup		2.40	.52									.20		.20																		3.32
Minden	Blue		T.	.50										.06								.95					.01		.24				1.76
Mitchell	North Platte			.04			.20				.31				.09						.01	.01							.05				0.75
Nebraska City	Missouri	.16		.10				.20			.10			T.	.10					.40		.50	T.				T.	.38			.15		2.49
Norfolk	Elkhorn	.06			T.										T.	T.						1.20	.15				T.	.27					1.68
North Loup	Loup	.37		.32										1.33								1.08	.07				T.	.14					3.31
North Platte	Platte		.11	.10	.01		.05				.08										.02	.62	.15				.07	.47	.05				1.73
Oakdale	Elkhorn			T.												T.	.27		T.		T.	1.43	.11				.48	.26					2.55
Omaha	Missouri	.04		T.			T.	.40	.14	T.				.17	.33	T.				.15	.02	.72	.18					.05	.50		T.		2.70
Ord	Loup			.33																		1.44					.19						1.96
Palisade	Republican	.05																				1.20	.04			.10		.05					1.44
Pawnee City	Gt. Nemaha			.23																T.	T.	.48	.20					*	.25				1.16
Paxton	South Platte			.07	.01	.01	.01	T.			.10									T.	T.		.35				.38	.56	.24				1.73
Plymouth	Blue	.05		.30			.05		.16						.16								1.00					.02	.01			.04	1.79
Purdum	Loup			.39				T.			.07										.18	.04	.37			.01	1.75	.07	.07	.01			2.96
Ravenna	do	.30	T.	.46				T.						.51			.17					1.25						.03	T.				2.72
Red Cloud	Republican		T.	.60		.01			.02						.21	T.						.73					T.	.05					1.62
St. Libory	Loup	.05		.79										1.15							1.80						T.	.10					3.89
St. Paul	do	.10		.61										1.68	.29							1.13					.05	.57					4.43
Santee	Missouri		.30																				1.27	.15			T.	.25					1.97
Sargent	Loup			.25																		T.	2.00					.30		T.	T.		2.55
Schuyler	Platte			.18		.15								1.30								2.20	.02					.10					3.95
Scottsbluff	North Platte		T.	.01	T.		.81				.40				.02				T.									.03	.03	T.			1.30
Seward	Blue		.32			T.		.50						.45				.10			1.20	.80	.50					.35					4.22
Sheridan	Loup	.02		.18													10					.00	.09	.03			.27	.33	.03				2.05
Sidney	South Platte			.03	.07	.01		.05			.13					.02					.01								.20	.34			0.86
Springview	Niobrara										.30				T.						.03	.28	.90				.20	.85	.05	T.	.10		2.71
Stanton	Elkhorn																					1.51						.20		.50			2.21
Stratton	Republican																					1.20						.05		.08			1.33
Superior	do			.55		.05									.95							.55											2.10
Syracuse	Lt. Nemaha	.15		.20					.43					.20	.07	T.				T.		.73	.04					.02	.42		T.		2.26
Tecumseh	Gt. Nemaha			.27					.13						.08	.19					.14	.52		.05					.06	.04		.30	1.78
Tekamah	Missouri	.88								T.					1.55	T.	.03				.10	.30	.72	.22					.27	.02			4.09
Tobias	Blue	.06		.37			T.	T.	1.32						.15	T.				T.		1.01	.16						.33			.04	3.44
Valentine	Niobrara			.04			.31				.12			T.						T.	.15	.15	.32			.02	.18		.03		.05		1.37
Wahoo	Platte			.10										.28								2.20	.25					.67					3.50
Wakefield	Elkhorn						T.									T.					.44	.32	.52					.04	.12				1.44
Walthill	Missouri	.12					.10															.54	.73	1.03									2.52
Watertown	Platte			.27				.02						.55				T.				1.65					.40		.05	T.			2.94
Wauneta	Republican				.10																	1.00				15		.50					1.75
Weeping Water	Missouri	.21		.13			T.		.55					.42	.22		T.			T.		.98	.12	T.				.03	.36		.99		4.01
Westpoint	Elkhorn	T.					T.								.98							1.63	.35					T.				2.96
Wisner	do	.12													.02							2.02	.10					.58				2.84
York	Blue	.55		.59											.09	T.						1.42	.16				T.	.10					2.91
Iowa.																																	
Afton	Missouri								T.			.42		.04	.30	T.				.41		.16	.16					.45	.06				2.00
Allerton	Chariton	.04						T.	.20			.11		.21						.50	.08	.16	.03					T.	.25	.15		.07	1.80
Alton	Floyd	.87														.02				.08		.60	.47					.01	T.		.11		2.16
Atlantic	Nishnabotna	.08		T.					.09	T.	.07			.08	.80	T.				.18	T.	.46	.22					.02	1.05		1.27		4.32
Audubon	do	.12									.10			.10	1.15					.15	.10	.35	.11					.02	.84		.55		3.59
Bedford	Missouri	.15										.23		.01	.45					.34	T.	.07	.10						.57	.18	.25		3.35
Centerville	Chariton	T.							.05					.01	.02			T.			1.90	1.00	.10					.50		.40		.14	4.12
Chariton	do								.48			.20		.20	T.			T.		1.80		.28	T.					T.	.10	.26		1.25	4.57
Clarinda	Nodaway	.12	T.	.02					T.			.27			.96	.40					T.	.11	.11	.25					.55	.87		1.08	4.74
Corning	do	.20										.23		T.	1.21					T.	T.	.34	.26					T.	1.21	.10		.30	3.85
Corydon	Chariton																																
Council Bluffs	Missouri	.08		T.				T.	.53	.16				T.	.65	T.	T.			T.	T.	.47	.53				T.	T.	1.01	T.	.62		4.05
Creston	do	.81	T.									.33			.50	.44					.12	.03	.07	.24					.09	.23		.02	2.88
Cumberland	Nodaway							T.			.02			T.	.68					.09		.31	.22					T.	.42		1.12		2.86
Denison	Missouri	.10									.34				.80	.24				.15	.14	.58	.04					.10	.45		T.		2.94
Elliott	Nishnabotna	.08							.05	T.	.24			T.	1.04					.30	T.	.63	.05					T.	.73		T.	.11	3.23
Greenfield	Nodaway	T.										.30			1.05					.14	T.	.43	.26						1.70			1.21	5.09
Harlan	Nishnabotna	.12						T.	.16		T.			T.	1.69	T.	T.			.10	.05	.48	.08					.09	.75	.01	1.45	.02	5.00
Inwood	Big Sioux	.53					T.								.03	.09		.05		T.		.08	.38					.07			.08		1.31
Lamoni	Missouri	.02										T.		.14	.05	.04				.34		.21	.21						.26	.32		.01	1.60
Larrabee	Little Sioux	.68																				.43	.40					.13					1.64
LeMars	Floyd	.94						T.								.03		.61		T.		.30	.36					T.	T.		.01		2.25
Lenox	Missouri	.10										.50			.63					.75		.10	.28						.52	.15		.31	3.34
Leon	do	T.						T.	T.			.27		.53	.20	T.				.95		.20	.25				T.	T.		.40	T.		2.80
Little Sioux	Little Sioux	.39													1.35					.08		1.05	.41					.04	.55				3.87
Logan	Missouri	.25											.15	2.10						.47	.10	.46	.50					.20	.31	.90				5.44
Mount Ayr	do	.07							.05			.35		.65	.22					.95	.03	.07	.35						.97	.29		.07		4.07
Murray	do	.10						.06			.23			.15	.33	T.	T.			.36	T.	.58	.24						.50	.05		.64		3.24
Odebolt	do										.21			.40						.25		.80	.12					.12	.31			.20	2.41
Onawa	do	.47								.03					.45		.02			.15		1.10	.05					.03	.22		.60		3.12
Pacific Junction	do	.15		.17					.37					T.	.30					T.	T.	1.15	T.	T.				T.	.93		.39		3.46
Rock Rapids	Big Sioux	.40													.05	T.		T.				.31	.16	.06				.15			.10		1.23
Sheldon	Floyd	.11													.05	.05					T.	.55							T.		.15		0.91
Sibley	Big Sioux	.56																T.		.10	.01	.16	.32	.42				.03			.02	.22	1.84
Sioux Center	Floyd	1.00						T.								.03		.09		T.		.32	1.02					T.	.02		.15		2.63
Sioux City	Missouri	.05					T.									.02				T.	.36	1.06	.03					T.	T.		.02		1.54
Spencer	Little Sioux																			.25		.75		.66				.18			.16		
Thurman	Missouri	.31		.38					.30		.02			T.	1.17		T.			.10	T.	1.60	.10					T.	.61	T.	1.64		6.23
Washta	Little Sioux																			T.	.60	.73	.18					.15	T.	T.			1.66
Woodburn	Chariton	.13						T.	T.	T.		.37		.32	.05			T.		.76	T.	.30	.08					T.	.15	.12		.60	2.88
Kansas.																																	
Abilene	Smoky Hill			.68	.04																	.04	T.						16	.38		.54	1.84
Agricultural College	Kansas	.10		.40			T.				.15			T.	.09	T.					T.	.30						T.	.52	.62			2.18
Alton	Solomon			.16		T.	.10							T.	T.	T.					T.	.61	T.				T.	.15	.04	T.		.48	1.54
Atchison	Missouri			.26								.10		.22	T.					.23	T.	.57	.72					T.	.32	.80		.55	3.77
Beloit	Solomon	.01		.22	.08	T.	.01	.02							T.	T.						.51	.80					T.	.05	.17		.73	2.60
Blakeman	Republican			.04	.01			.09						.16	.06							.51	.80				.07		.01	.09			1.84
Blue Rapids	Blue	.05		.17										.03								.56	.05										0.86
Centralia	do	.06		.38										.09	.05						T.	.42	.12						.26	.43			1.81
Chapman	Smoky Hill	T.		.49							T.					T.						.25						T.	.37	.45		.46	2.02

TABLE 2.—*Daily precipitation for May, 1911. District No. 6*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
***Kansas*—Contd.**																																	
Clay Center	Republican			.57																		.60							.10			.60	1.87
Colby	...do			.01	.02	.04		.03														.39	.67				.03	T.					1.19
Concordia	...do		T.	.45			T.	.34								.01					.01	.91	.01					.02	.13		1.06		2.94
Densmore	Solomon			.04	.15	T.																1.40	.14					.06	.04	T.			1.83
Dresden ‖	Republican	.05	T.	.03	.01	T.	T.		T.	T.					.14	.03					T.	T.	1.79	T.				.04		.03	T.		2.12
Ellsworth	Smoky Hill			.67	T.	.05	.13	T.								T.						.12						.24	.25				1.46
Enterprise	...do	T.			T.									T.		T.						.16	.03					T.	.32	.54		.32	1.37
Eskridge	Kansas			.21								T.									.05	.48	.42						.73	.05		.10	2.04
Farnsworth	Smoky Hill			T.	.05	.02							.31		.07	.09						.68	.28						T.	T.	T.	.06	1.56
Fort Scott ‖	Marmaton				.40			T.				.15							T.		.53	.07	.05	.08				2.05	T.	.35	.12	3.80
Frankfort	Blue			.40				T.						T.	.22							.58							T.	.92			2.12
Garnett	Osage			.51								.22					T.	.05		.46	.33	.32							.05	.05		.56	2.55
Goodland	Smoky Hill				.04	.06		.02			T.												.24			.23	.39	.05	.06			T.	1.09
Gove	Blue					.05										.05							1.30							.04		.04	1.48
Hanover	...do	.06		.39			T.								.02	T.						.67	.04					T.	.05	.11		T.	1.34
Harrison	Republican			.60			T.			T.					.72							1.00					T.	.03	T.		.18		2.53
Hays ‖	Smoky Hill	T.		.15	.03	.14	.26						.08		.08	.03	T.					.11	.97						.15	T.		.27	2.27
Hill City	Solomon		.12		.07	.08																1.20							.10		T.		1.57
Horton ‖	Kansas	.05		.08	.22			T.				.42			1.58	T.						.56	.06	.16					.35	.41	.04		3.93
Jewell	Republican	T.		.48		T.										.30						1.13							T.		T.	.35	2.26
Lawrence	Kansas			.01							.14									.04	.06	.75	.03	.13				.23	.01	.02				1.42
Leavenworth	Missouri	.01		.10								.03		T.						.03	.04	.37	.20						.14	.75				1.67
Lebanon	Solomon	.55						T.														.72												1.27
Lindsborg ‖	Smoky Hill			1.00																								.55			.15		1.70
Mankato	Republican			.55																		1.43	T.					T.	T.		T.	1.50	3.48
Minneapolis	Solomon		T.	.40		T.	T.								T.	T.						.31						T.	.37		1.55		2.63
Moran	Marmaton			.18	.12							.20						T.		1.75	1.00	.34	.07					T.	T.	T.	T.	T.	3.66
Natoma	Saline																					.10										.04	0.14
Norton	Republican	T.	T.	.07	.15	.01	.03		T.													1.28	.18					.08	.01	T.				1.81
Oberlin	...do			.04	.03	.01		.02						.40	.02	.06						.89	.77					.35	.03	.03				2.65
Oketo	Blue	.10		.33						T.					T.	T.						.88	.04					T.	.12	.03	T.			1.50
Olathe	Kansas			.03								.23						T.		.21	.33	.21	.12						.01	.03				1.22
Osage City ‖	Osage			T.	.26							.19									T.	.43	.18	.15					.85	.28			.28	2.62
Ottawa	...do			.19								.24								.28		.41	.18						.28	.03	.04	.02	1.67
Phillipsburg	Solomon	T.		.15	T.	T.								T.								1.12	.05				T.	.09	.01					1.42
Pleasanton	Osage			.44								.05									1.74	.12	.07					.10		.06		.12	2.76
Republic	Republican	.02		.52											.05							.78	.02			T.			.03		.10		1.52
Russell	Smoky Hill			.42	.10			T.					T.		T.							1.00							.15				1.70
Russell Springs	...do					T.		.03	T.						.04						.20	.50					T.						0.77
St. Francis	Republican			.04	T.	.01															.04		.15						.51	.07			0.82
Salina	Smoky Hill		T.	.88	T.	T.	T.								T.	T.	T.			T.	.02	.03	T.					.03	.18	.09	T.	1.95	3.18
Scott	White Woman.				T.	T.		T.						T.	.06	.15						.46	.41						.50			.12	1.70
Smith Center	Solomon	.05	.38												.25							.75											1.43
Topeka	Kansas			.07							.04			T.		T.				T.	.02	.28	.47					.06	.67	.29	.01	T.	1.91
Valley Falls	...do			.12								T.										.30	.25						.28	.55				1.50
Vinland	...do			.06				.02			.44									.06	.18	.80	.24					.33		.22				2.35
Wakeeney	Smoky Hill			.12	.15	.01	.01						.10		.03	.11						1.13	.22					.18		.06	.11	.14	2.37
Wallace	...do				T.	.01																	.09				T.		.05			.37	0.52
Wamego	Kansas			.20							T.			T.	.20						T.	.75	.06					T.	.50	.66	T.		2.37
Missouri.																																	
Amoret	Osage			.27								T.								T.	1.40	.02	T.					.38		T.				2.07
Appleton City	...do			.10								.20											.08					.05	.16	.05				0.64
Arlington ‖	Gasconade	.45			.10																									.45		T.		1.00
Arthur	Osage			.31								.18									.60	T.						.21		.59				1.89
Avalon	Grand			.14										.88						.55		.35										.55	2.47
Bagnell ‖	Osage	.30			.05																												0.35
Bethany	Grand			T.			.05							1.13						.04		T.	.36						T.	.24	.32	.99	3.13
Bolivar	Osage			.11	.03							.04																		.69				0.87
Boonville ‖	Missouri	.40	T.											.08							.16									.04	.04	.70	1.42
Brunswick ‖	Grand	.07	T.																		1.32	.11		T.					.26			.40	2.16
Columbia	Missouri	T.		T.							.01	.18		.02						.04	.27		T.				T.	.17	T.		.58	1.27
Conception	...do	T.		.04				T.				T.		.59						.50		T.	.44					T.	.31	.31		.95	3.14
Eldorado Springs	Osage											.13											T.									T.	0.13
Fayette	Missouri	.02												.09							.25	.30						.02	.13			.15	0.96
Fulton	...do	T.		.01								T.		T.		.01					.73	.13	.04	T.					.18		.08	.48	1.66
Glasgow ‖	...do	.06	T.																											.01			.36	0.83
Grant City	Grand	.05		T.				T.	T.			.36		.13	T.					.48			.34	T.					.50	.26		1.60	3.72
Harrisonville ‖	Osage				.04			.03				.14									.38	.07	.10	T.									0.76
Hazelhurst	Grand	T.						T.	T.			.18		1.31				.05		.40	.39	.23	.13					.10	.06	.83		.92	4.60
Hermann ‖	Missouri	.26	T.		T.																.02	.56		.01					.24	.20	.56	.34	2.19
Houston	Gasconade			T.															.25			T.							T.			T.	0.25
Jefferson City ‖	Missouri	.12										.01		T.							.01	.01							.05	.04	.92	.35	1.51
Kansas City	...do	.03		.02				.01			.10									.23		.32	.32					.04		.03				1.10
Kidder ‖	Grand	.01		.02	.18			.20				.06		.73						.75		.10	.07	.17						.55	.11	1.20	4.15
Lamonte	Missouri	T.		T.	T.							.32									.20	.18	.18					.24	T.	T.		.40	1.52
Lebanon	Osage			.10																	.20									.06			0.36
Lexington ‖	Missouri				T.				.05			.05									.70	.03	.02	.07					.68		.07	1.03	2.70
Liberty	...do	.03						.06				.06									.36		.24	T.				.01	T.	.36		.97	2.09
Lockwood	Osage											.14							T.		.05									.10			0.29
Marshall	Missouri			T.							T.										.60	.26	.20					.09	.14	T.		1.50	2.79
Marshfield	Osage																																
Maryville ‖	Missouri	.07		.05								.03			.07						.21	T.	.09	.42					.45	.35	.03	1.04	2.81
Mount Vernon	Osage				.04							.16									T.									1.44		.10	1.74
Nevada	...do			.22	.08							.14									.01	.03	.03					T.		.06		.21	0.78
Oregon	Missouri	.14		.15							.15			.54						.02	T.	.55	.34							.77		2.06	4.72
Osceola ‖	Osage	.07			.04							.07									.15		.10									.05	0.48
Pattonsburg ‖	Grand										.61			1.10						.65	.15									.38		.63	3.52
Rolla	Gasconade				.02																1.36	.08							.22		.19	.04	1.91
St. Charles	Missouri	T.																			T.	T.	T.						T.	.60		.34	0.94
St. Joseph	...do	.04		.10							.58			1.45						.06	.02	.23	.21					.06	.18	.93	.54	.91	5.31
St. Louis	Mississippi	T.		T.																	.66	T.	.02						1.22	T.		.36	2.26
Sublett	Chariton	T.														.50					.50							.20	.10	1.00	1.00	.10	3.40
Trenton	Grand		.03				T.	.04	T.		.23			.78				T.		.72	.17		.20					.12	.26	.67	.96			4.18
Unionville ‖	Chariton	.25							.34			.05			.70						1.25	.60	T.	.20						.24	.40	.45	.70	5.18
Warrensburg	Missouri			T.								.26									1.10	T.	T.					.09	.10			.08	1.63
Warrenton	...do	.10	T.																			.63		.01					T.	.07	.37	.44	1.62
Warsaw	Osage			T.								.08		.11							.19		.29						.03	T.			0.70
Wheatland	...do																																

* Precipitation included in that of the next measurement.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
‡ Separate dates of falls not recorded.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 6, Missouri Valley.*

Date.	Wyoming.																Montana.											
	Basin.		Cheyenne.		Fort Laramie.		Lander.		Newcastle.		Pathfinder.		Sheridan.		Yellowstone Park.		Billings.		Dillon.		Havre.		Helena.		Lewistown.		Malta.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	60	38	42	25	36	26	54	34	48	28	54	30	55	33	48	26	60	29	68	34	57	31	59	30	58	26	60	28
2....	66	41	47	28	35	26	56	32	51	26	50	30	57	30	48	32	65	37	70	35	62	31	61	38	60	32	61	32
3....	68	43	55	30	47	30	66	36	54	36	66	32	62	33	54	37	72	37	68	34	70	40	65	44	63	34	68	40
4....	74	44	69	34	57	34	73	38	68	29	74	32	76	37	65	37	82	37	70	36	75	48	76	45	77	38	73	43
5....	89	45	72	37	54	39	82	37	72	40	80	35	86	37	72	41	92	38	77	40	91	51	85	46	84	40	90	48
6....	89	51	78	44	85	42	69	35	82	46	78	49	67	36	53	36	69	47	62	35	78	40	65	38	78	45	74	32
7....	85	46	64	40	68	38	72	30	70	40	75	33	72	28	60	28	76	34	68	32	70	36	66	31	68	25	72	38
8....	80	48	74	45	86	48	78	43	84	51	76	50	82	44	65	34	87	42	62	34	76	42	68	46	78	38	84	43
9....	66	45	78	46	89	43	64	43	80	48	74	45	62	46	51	32	56	48	57	33	64	45	53	42	61	41	71	45
10....	60	36	46	34	51	40	49	33	60	35	60	31	54	35	45	29	60	43	60	31	57	40	50	37	52	32	57	41
11....	70	32	61	31	68	31	63	35	60	35	60	31	60	35	53	26	66	32	66	34	63	39	63	39	66	34	63	35
12....	77	30	70	34	79	33	75	28	78	38	71	31	75	30	64	33	80	32	68	34	76	40	71	37	75	34	75	35
13....	74	40	72	45	83	45	73	48	81	48	72	45	81	41	62	36	82	40	70	35	78	48	60	43	70	40	82	47
14....	68	40	75	40	84	42	72	42	86	46	74	41	71	49	60	40	70	42	69	33	63	41	51	40	55	33	72	45
15....	73	52	76	47	85	51	62	44	85	54	70	43	75	52	57	38	76	52	65	34	55	49	56	41	58	40	60	47
16....	77	40	70	42	79	50	67	41	86	48	65	41	73	41	52	37	74	42	67	32	61	50	62	38	64	42	62	55
17....	76	42	78	44	86	35	64	52	88	48	68	42	73	47	45	33	71	42	68	35	62	45	59	38	62	41	67	44
18....	71	40	75	41	79	42	57	38	88	40	64	38	62	43	43	32	69	42	66	33	67	41	56	37	60	40	69	41
19....	76	44	50	35	58	39	52	27	70	35	56	33	54	35	45	29	63	35	67	34	56	46	55	39	47	32	57	41
20....	62	40	48	32	60	38	56	31	56	32	52	34	54	38	51	32	68	42	68	33	66	47	60	42	64	42	65	37
21....	64	40	56	31	66	34	68	31	70	33	67	35	70	36	61	32	78	34	70	35	73	41	71	39	70	34	75	45
22....	68	42	65	34	74	27	73	42	80	35	73	36	70	45	56	39	68	50	69	36	70	43	68	41	61	42	69	41
23....	80	41	79	37	89	27	79	38	86	42	76	42	67	39	59	42	60	43	67	34	56	38	48	33	50	35	63	37
24....	75	40	79	46	89	44	76	46	80	45	74	51	57	45	58	36	58	42	68	35	49	39	42	32	45	32	53	45
25....	76	41	79	48	84	48	75	47	88	48	77	45	64	42	53	32	55	45	69	33	45	40	44	32	43	34	49	38
26....	70	35	69	42	74	54	47	35	76	40	76	43	42	32	37	26	37	32	62	31	44	39	42	36	42	32	45	32
27....	66	31	58	28	62	29	50	32	60	28	56	32	50	31	44	24	55	30	59	24	53	38	54	32	49	32	55	32
28....	60	30	51	40	56	45	61	32	57	40	70	32	66	32	52	31	66	32	68	32	61	35	57	33	61	30	61	31
29....	66	41	61	44	72	46	60	42	60	46	72	34	64	38	61	28	70	43	70	33	69	37	64	37	62	32	67	37
30....	70	42	76	40	82	45	75	35	71	40	81	39	72	44	70	31	76	40	74	32	78	45	73	37	73	34	77	42
31....	86	43	69	49	84	43	77	45	86	46	82	48	86	37	77	34	83	42	78	33	84	47	81	45	81	40	83	46
Mns..	72.3	40.7	65.9	38.5	71.0	39.2	65.9	37.8	72.9	40.2	69.1	38.2	66.4	38.4	55.5	33.0	69.2	39.5	67.4	33.5	65.5	41.7	60.8	38.3	62.5	35.7	67.1	40.1

Date.	Montana.				North Dakota.										South Dakota.													
	Miles City.		Poplar.		Berthold Agency.		Bismarck.		Dickinson.		Jamestown.		Williston.		Aberdeen. §§		Huron.		Kadoka.		Kimball.		Lemmon.		Pierre.		Rapid City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	58	24	56	30	57	14	47	18	53	15	41	20	48	30	53	23	48	25	45	23	46	22	.....	.....	50	26	47	26
2....	66	32	61	36	59	8	56	22	57	23	50	19	57	16	58	26	55	23	55	24	53	28	.....	.....	56	30	51	28
3....	68	43	59	39	67	23	64	29	63	26	60	18	64	33	63	24	60	28	54	36	57	31	.....	.....	57	36	54	29
4....	80	44	85	40	71	38	66	36	69	32	63	30	73	44	68	28	64	29	57	34	63	34	.....	.....	62	34	61	33
5....	90	52	92	51	86	43	79	44	84	39	69	38	87	50	74	36	68	37	72	43	62	37	.....	.....	67	46	75	38
6....	78	60	76	52	86	47	86	50	83	46	75	45	79	47	80	51	80	54	92	52	79	48	.....	.....	84	55	89	49
7....	76	34	72	31	86	33	72	45	70	30	73	50	70	35	71	51	73	49	80	46	73	56	.....	.....	74	52	68	45
8....	89	54	89	42	88	44	84	48	86	48	75	39	82	41	81	36	84	40	89	47	84	41	.....	.....	87	49	87	49
9....	66	56	72	51	87	57	89	54	79	53	80	51	75	41	95	58	95	58	91	61	94	52	.....	.....	96	62	79	54
10....	63	50	59	37	60	40	54	41	61	41	80	29	53	37	52	52	66	44	73	42	80	44	.....	.....	66	47	54	44
11....	63	41	60	38	58	38	57	37	58	33	42	32	49	35	59	38	64	41	67	49	68	39	.....	.....	65	45	63	41
12....	80	37	80	28	77	21	72	30	76	24	58	34	76	24	68	31	72	33	79	39	74	36	.....	.....	75	38	77	40
13....	88	50	88	49	86	44	84	50	81	46	77	44	83	46	81	40	86	52	86	54	85	49	.....	.....	88	57	82	50
14....	82	56	82	48	83	43	86	52	86	44	76	54	78	48	93	58	88	59	94	54	89	60	.....	.....	89	61	86	55
15....	70	57	75	49	75	55	62	54	64	50	70	51	60	50	82	58	86	65	91	60	89	60	.....	.....	91	63	84	56
16....	76	52	69	50	84	40	78	57	71	50	72	53	68	52	88	61	85	58	86	52	85	61	.....	.....	86	62	78	54
17....	74	48	73	43	73	43	92	54	79	47	80	49	75	46	95	48	93	50	93	50	93	50	.....	.....	94	59	85	51
18....	68	52	69	45	70	40	78	48	69	47	78	51	64	49	90	52	92	64	88	56	92	60	.....	.....	89	60	73	45
19....	66	50	65	45	60	40	71	45	67	42	70	46	65	42	72	48	74	54	68	45	73	54	.....	.....	71	53	59	45
20....	65	44	68	32	75	25	55	39	58	38	65	41	62	38	64	45	63	47	56	37	61	45	.....	.....	56	44	58	42
21....	76	42	76	34	78	32	69	32	69	33	64	33	71	39	70	38	67	44	70	31	62	41	.....	.....	70	36	67	40
22....	72	53	71	45	79	49	72	37	73	41	62	57	67	47	62	50	66	50	65	40	65	50	.....	.....	62	51	70	40
23....	69	52	70	53	69	46	72	41	76	47	67	49	74	55	72	50	74	46	86	40	71	46	.....	.....	76	44	84	53
24....	66	40	61	44	68	50	82	55	66	51	79	53	57	45	90	50	85	58	81	52	83	55	.....	.....	87	62	67	51
25....	68	48	54	43	61	48	72	48	63	47	76	52	54	40	78	53	85	53	78	45	78	55	.....	.....	79	54	77	51
26....	55	38	48	35	57	39	55	41	45	41	65	47	47	36	92	54	91	57	87	54	88	63	.....	.....	87	53	63	38
27....	54	34	42	32	50	36	56	37	49	34	58	40	44	34	64	42	65	46	64	34	65	42	.....	.....	64	40	58	35
28....	60	36	67	29	67	27	66	30	61	27	59	32	62	32	60	38	62	42	64	43	60	41	.....	.....	63	44	61	36
29....	58	40	65	36	67	44	71	46	65	39	62	44	66	49	72	45	73	52	67	48	67	48	.....	.....	69	52	59	49
30....	74	50	77	39	72	50	72	51	70	48	62	52	74	50	72	42	77	56	87	50	78	55	.....	.....	74	55	68	47
31....	88	49	88	50	85	43	84	45	81	45	73	46	84	50	83	47	82	49	87	45	83	50	.....	.....	87	52	84	47
Mns..	71.2	45.7	70.0	41.2	72.3	38.7	71.1	42.5	68.8	39.6	67.1	41.9	66.7	41.3	74.3	44.3	74.9	47.2	75.9	44.7	74.2	46.9	.....	.....	74.9	49.1	69.9	43.9

TABLE 3.—*Maximum and minimum temperatures at selected stations, May, 1911. District No. 6*—Continued.

Date.	South Dakota.						Colorado.				Nebraska.															
	Sioux Falls.		Watertown.		Yankton.		Denver.		Wray.		Alma.		Bridgeport.		Grand Island.		Hay Springs.		Hebron.		Lincoln.		North Platte.		Oakdale.		Omaha.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	49	28	49	23	37	25	53	33	46	27	47	29	39	15	44	24	45	11	45	30	45	32	41	23	38	24	44	33
2	55	28	54	17	49	29	55	35	57	29	48	27	45	24	52	30	41	23	52	27	55	31	53	28	54	24	54	33
3	63	30	63	22	55	36	55	35	49	33	49	33	46	33	45	34	40	32	45	39	51	42	39	32	55	39	54	45
4	68	36	67	28	64	35	70	37	46	38	53	41	50	37	60	33	52	34	60	32	63	37	46	38	65	30	66	42
5	73	40	70	36	68	43	82	42	54	43	55	44	57	43	62	44	52	34	66	40	68	41	51	44	69	38	68	47
6	76	49	77	47	77	52	81	49	88	45	76	48	80	50	76	52	82	48	71	49	73	52	82	51	76	50	71	52
7	71	41	72	50	69	54	73	48	76	46	79	53	70	46	78	58	70	40	79	56	80	58	70	47	74	53	80	60
8	85	39	83	35	85	45	82	51	89	44	90	48	80	46	86	54	81	43	85	53	84	54	86	43	86	43	82	58
9	93	58	93	61	92	59	85	55	92	56	96	60	88	46	92	62	85	49	90	64	89	66	93	51	92	50	88	66
10	79	48	86	43	76	47	63	43	82	52	88	55	65	40	83	68	70	39	94	67	93	49	69	40	74	46	91	52
11	65	36	58	39	71	47	68	35	76	33	76	38	68	30	79	45	63	36	75	44	76	47	71	35	74	44	75	49
12	77	50	70	26	72	42	79	41	81	41	81	37	76	38	82	47	75	34	81	43	76	47	82	47	75	40	72	52
13	82	53	84	50	82	55	80	52	89	56	81	55	85	45	85	56	81	44	82	58	80	60	89	56	85	57	77	60
14	94	60	87	53	90	67	81	49	87	61	84	62	85	45	90	67	85	45	83	61	85	64	86	57	90	63	85	65
15	86	60	79	60	83	66	80	47	87	59	83	65	86	54	85	66	85	57	78	65	81	66	86	62	85	67	81	68
16	86	63	84	57	88	64	79	44	81	47	88	62	79	40	89	63	81	44	85	63	86	66	82	49	90	62	86	70
17	95	66	92	50	91	65	85	49	92	52	92	62	87	45	93	61	84	41	89	60	90	66	91	60	91	57	89	68
18	85	59	91	66	94	70	84	52	93	56	94	70	88	39	96	68	80	45	91	60	91	71	94	52	95	65	91	71
19	72	52	77	55	71	57	57	43	70	47	78	55	70	43	76	60	61	40	78	64	79	57	64	45	71	53	79	62
20	70	46	68	51	64	51	52	34	62	40	67	43	65	40	66	52	58	37	66	52	69	51	56	39	65	48	69	54
21	56	45	60	43	57	47	61	42	61	32	50	42	66	28	54	44	64	31	53	47	59	48	55	38	53	46	64	51
22	68	40	70	49	67	50	71	38	68	46	65	43	83	34	66	42	65	37	57	41	61	43	62	46	66	42	62	48
23	71	39	76	42	76	50	85	47	89	41	77	45	90	38	80	44	84	41	76	42	77	47	77	40	75	43	76	51
24	87	65	85	54	87	57	84	56	94	51	93	55	88	44	80	58	84	48	92	57	94	61	95	49	89	52	93	62
25	93	53	78	52	92	60	85	54	94	51	92	66	87	45	80	64	82	42	93	65	94	68	93	57	93	60	94	69
26	92	70	91	62	89	62	76	51	90	61	88	68	82	54	90	66	81	49	90	68	91	72	85	54	89	61	91	70
27	83	50	78	46	65	51	71	41	74	42	82	54	69	31	70	56	60	32	71	61	79	58	69	47	66	51	79	56
28	70	45	65	40	61	50	61	43	64	46	65	54	55	46	58	52	55	43	61	55	58	54	54	50	57	49	62	54
29	83	47	73	49	75	52	70	48	70	50	68	52	66	47	71	52	68	43	72	53	72	53	62	49	75	50	74	56
30	80	53	74	57	80	60	78	48	79	50	88	59	84	46	85	63	72	43	89	61	89	60	82	59	85	60	85	62
31	83	48	80	46	81	54	77	51	83	56	88	58	78	65	85	57	78	43	83	61	81	61	81	52	83	52	79	63
Mns.	77.1	48.3	75.3	45.5	74.5	51.7	73.0	44.9	76.2	46.2	76.2	51.1	72.7	41.2	75.4	53.0	69.8	39.8	75.2	52.8	76.4	54.3	72.5	46.5	75.3	49.0	76.2	56.4

Date.	Valentine, Nebr.		Iowa.						Kansas.										Missouri.							
			Clarinda.§§		Sibley.§§		Sioux City.		Colby.		Concordia.		Salina.		Topeka.		Wakeeney.		Columbia.		Kansas City.		St. Louis.		Unionville.§§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	38	20	46	33	48	29	46	31	.....	.....	47	32	56	33	51	37	52	27	46	38	50	36	61	41	45	38
2	45	21	56	30	54	26	53	31	.....	.....	50	31	53	27	56	35	58	28	58	33	58	38	58	39	56	33
3	46	36	45	33	62	25	56	40	60	30	47	40	52	41	50	45	54	42	48	40	50	45	53	45	58	36
4	48	39	60	36	68	28	65	39	48	36	61	40	58	44	65	45	47	40	64	44	63	44	62	45	67	40
5	56	47	60	36	72	35	68	40	52	36	65	42	65	44	69	44	55	45	68	38	68	48	65	45	70	36
6	80	51	59	39	74	38	72	50	89	46	70	53	69	51	73	47	81	50	73	45	72	48	70	51	72	40
7	69	47	82	47	74	50	72	56	82	50	82	60	88	65	82	57	78	57	79	50	80	58	76	56	76	50
8	83	48	86	58	85	42	82	51	92	43	87	60	90	61	87	63	91	46	86	59	86	64	83	59	82	54
9	91	51	91	60	90	46	87	64	98	44	92	67	92	65	90	63	99	61	87	63	88	64	88	68	85	56
10	62	40	88	62	87	58	81	48	79	52	93	50	96	68	90	58	87	61	88	64	89	63	85	66	86	60
11	67	41	50	43	69	43	73	47	78	34	77	47	85	43	77	47	78	36	75	55	76	51	75	64	73	47
12	76	42	53	44	72	33	69	46	90	48	82	51	86	49	82	51	83	53	82	49	80	57	80	63	80	45
13	84	56	66	49	80	37	77	56	90	49	83	61	85	66	86	64	88	56	84	58	85	64	84	62	84	50
14	90	61	82	61	89	54	86	54	89	55	83	66	88	65	87	71	81	55	87	66	85	69	85	64	83	54
15	86	67	70	62	85	65	82	65	85	65	79	67	84	67	88	66	81	60	90	66	90	67	87	65	86	60
16	84	54	88	63	89	64	88	68	89	50	86	66	86	65	90	73	80	59	89	66	89	72	87	69	85	64
17	91	58	72	66	91	65	90	67	95	53	89	66	91	66	90	70	89	59	90	68	89	70	89	71	88	66
18	90	54	87	63	90	65	92	70	88	54	92	72	94	70	90	71	94	65	90	69	87	71	90	72	85	68
19	62	49	73	70	76	60	81	61	90	49	80	60	85	68	89	66	77	57	87	64	89	62	86	71	86	70
20	53	43	74	53	74	46	69	52	66	40	70	57	68	58	66	58	68	50	82	63	70	59	83	64	80	55
21	60	36	56	54	58	47	59	49	54	39	57	46	60	49	62	50	54	34	71	56	65	53	79	66	72	56
22	60	46	62	44	65	47	62	48	65	41	63	45	60	44	62	48	54	44	74	53	64	51	81	61	70	50
23	79	41	63	44	72	43	74	46	80	41	83	48	85	42	82	49	83	45	79	48	78	50	79	60	76	48
24	86	54	93	58	85	50	89	60	98	51	94	59	98	65	95	63	93	60	94	61	92	64	92	65	78	50
25	80	55	95	62	89	59	92	66	95	60	93	68	96	68	93	68	92	63	93	65	90	69	93	70	86	60
26	85	53	82	65	90	63	88	70	82	62	91	71	94	72	90	70	88	64	93	64	90	70	94	72	89	62
27	64	41	73	68	68	55	71	54	80	45	79	62	82	67	82	66	74	53	92	68	85	67	93	73	85	64
28	54	45	58	55	64	48	61	54	70	49	66	56	88	61	67	59	64	54	90	64	75	62	92	68	74	57
29	68	49	65	52	76	49	74	51	65	40	68	54	66	55	73	55	70	52	84	59	78	56	87	67	76	53
30	77	54	80	53	78	50	82	62	75	50	91	62	90	56	87	62	92	61	88	65	89	64	88	68	80	55
31	82	47	63	60	80	50	82	54	87	57	86	66	84	62	85	66	84	60	84	60	84	68	84	63	79	60
Mns.	70.8	46.6	70.3	52.4	75.9	47.4	74.9	53.2	79.5[b]	47.2[b]	77.0	55.6	79.8	56.7	78.6	57.6	76.4	51.5	80.5	56.8	78.5	58.8	80.9	61.7	77.2	52.8

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT NO. 7, LOWER MISSISSIPPI VALLEY.

ISAAC M. CLINE, District Editor.

GENERAL SUMMARY.

Cool weather prevailed at the opening of the month, minimum temperatures being below 40° generally over the northern and western portions of the district, and below 32° in the mountainous portions of the Colorado and New Mexico areas. On the 5th a warm wave overspread the district, which continued until the 10th, giving maximum temperatures above 85° in all parts of the district, and above 95° in parts of the Colorado area. From the 11th to 15th cooler weather prevailed generally, but from the 16th to 18th another period of high temperatures prevailed, giving maximum temperatures above 90° in all parts of the district. From the 19th to 22d cool weather prevailed, day temperatures being below 70° in parts of the northern and western portions of the district and the night temperatures were below 40° in some localities. From the 23d to the close of the month unseasonably high temperatures prevailed throughout the district, except that from the 27th to 29th cool weather overspread the northern and western portions. During this warm period temperatures were much above the normal, and maximum readings were above 90° every day at many stations and above 100° in some localities.

Periods of precipitation were fairly well defined, but it is impracticable to generalize them for the district as a whole. Over the Colorado and New Mexico areas there were four periods of general precipitation, viz, 5th–8th, 14th–15th, 19th–21st, and 28th–31st, and scattered showers occurred on other dates. The precipitation was well distributed throughout the month. In the Texas area there were two periods of general rain, viz, 11th–16th and 26th–30th. The amounts were heavy in the Panhandle, but were light and insufficient elsewhere. In the Kansas area there were four periods of precipitation, viz, 3d–6th, 11th–16th, 19th–22d, and 27th–31st. The precipitation was well distributed over this area generally. In Oklahoma there were four periods of light precipitation, viz, 3d–5th, 11th–14th, 20th–21st, and 27th–30th. The amounts were insufficient for agricultural needs and at the close of the month rain was needed in practically all sections of the State. In the Missouri area there were four periods of light scattered showers, viz, 3d–4th, 11th–12th, 18th–21st, and 28th–31st. The monthly amounts were generally less than 1 inch and rain was needed in all portions of this area at the close of the month. Over the Tennessee area there were two periods of general precipitation, viz, 1st and 19th–22d, although scattered light showers occurred on the 12th–14th and 29th–31st. The drought in that State was severe in many localities at the close of the month. In Arkansas there was but one period of general precipitation, viz, 19th–21st, and at this time good showers occurred over nearly all parts of the State. A few scattered showers occurred on other dates, but at the end of the month more rain was needed in all localities. Over the Mississippi area there were three periods of showers, viz, 12th–14th, 19th–22d, and 28th–31st. Although local showers occurred on other dates, the drought was severe in many localities and at the close of the month rain was needed in all parts of this area. In Louisiana there were four periods of precipitation, viz, 1st–3d, 11th–13th, 18th–21st, and 29th–31st. Scattered showers occurred on other dates. At the close of the month rain was generally needed and the drought was severe in many parishes.

Speaking of the district as a whole, the monthly precipitation was well distributed and sufficient for agricultural and commercial needs over the western portion, but over the remainder of the district a severe drought was prevailing at the close of the month.

TEMPERATURE.

Mean temperatures for the month were above the normal in all parts of the district, the departures ranging from +0.4° to +4.4°, except that there was a deficiency at some stations in Louisiana ranging from −0.1° to −0.5°. The region of greatest excess in mean temperature was over the northeastern portion of the district. The warmest weather occurred generally at the close of the month, when the maximum temperatures were above 95° at some stations in all States and areas and were above 100°, except in the Colorado and New Mexico areas. The highest temperature for the district, 105°, occurred at Abbeville, La.; a maximum reading of 104° was recorded at Henrietta, Tex., and 103° at Greenwood, Miss. In some localities the maximum temperature was the highest ever recorded during the month of May. The monthly minimum temperatures occurred generally on the 1st or 2d in the western and northern portions, and on the 5th or 6th in the southeastern portion of the district, and were below 40°, generally, except in the southeastern portion of the district, where they were below 50°. The lowest temperature recorded during the month was 11° at Elizabethtown, N. Mex., and a minimum of 16° was recorded at Lake Moraine, Colo. Taken as a whole, temperature conditions were favorable during the first and second decades for all interests, but during the third decade the high temperature, coupled with the insufficient rain in many portions of the district, interfered with all agricultural and commercial interests.

Monthly mean temperatures and departures from the normal for the various States and areas are reported as follows: Colorado area, 55.8°, +2.7°; New Mexico area, 60.4°, +1.0°; Texas area, 69.0°, +1.8°; Kansas area, 67.4°, +2.6°; Oklahoma, 71.3°, +4.0°; Missouri area, 69.3°, +3.9°; Tennessee area, 71.6°, +2.9°; Arkansas,

70.8°, +1.0°; Mississippi area, 72.9°, +1.4°; Louisiana, 74.4°, +0.4°.

PRECIPITATION BY DRAINAGE AREAS.

Arkansas River and tributaries.—Less than the normal amount of precipitation occurred throughout this drainage area, except in New Mexico and at scattered stations in Colorado and western and central Kansas. Over the headwaters of the Arkansas River, in Colorado, the average from 37 stations was 1 inch, being about 1.2 inches below the normal. Over those portions of the Arkansas Valley proper that lie in Kansas and Oklahoma the precipitation was unevenly distributed, being generally above the normal in Kansas and below in Oklahoma; the average from 43 stations was 3.56 inches, about 1.2 inches below the normal. The average from 19 stations in the Cimarron Valley was 3.03 inches, about 0.7 inch below the normal. The precipitation was uniformly distributed over the headwaters of the Canadian River, in New Mexico, the average from 38 stations being 2.76 inches, about 1.4 inches above the normal. Over those stretches of the Canadian Valley that lie in Texas and Oklahoma the precipitation was unevenly distributed, ranging from less than 1 inch to more than 5 inches; the average from 30 stations was 3.32 inches, about half the normal amount. The precipitation from 9 stations in the Verdigris Valley averaged 2.26 inches and the average deficiency was about 3.1 inches. In the Neosho Valley the average from 18 stations was 2.38 inches, about 3.4 inches below the normal. Over that portion of the Arkansas Valley below the Oklahoma-Arkansas line the precipitation was unusually light, the average from 15 stations being 1.10 inches, about 4.6 inches below the normal.

Red River and tributaries.—Heavy precipitation occurred in a few widely scattered localities over this drainage area, but generally the amounts were small. Over those portions of the Red River Valley that lie in New Mexico, Texas, and Oklahoma the precipitation from 41 stations averaged 2.45 inches, about 3.1 inches below the normal. Less precipitation occurred in the Red River Valley below the Texas-Arkansas line, where the amounts from 18 stations averaged 1.85 inches, about 2.9 inches below the normal.

Mississippi south of St. Louis and small tributaries.—Very little precipitation occurred during the month in this drainage area, but the amounts for the several valleys and the departures from the normal vary materially. In the immediate Mississippi Valley the amounts from 43 stations averaged 1.04 inches, about 3.5 inches below the normal. Over the valley of the Meramec the precipitation averaged about 4 inches below normal. The average precipitation from 22 stations in the White River Valley was only 0.85 inch and the average deficiency was about 4.4 inches. The average from 30 stations in the Yazoo Valley was 1.89 inches, about 2.5 inches below the normal, and the average for the valley of the Big Black was 1.12 inches, about 3.3 inches below the normal. Over the Ouachita Valley the average from 21 stations was 1.24 inches, about 3.6 inches below the normal.

Louisiana coastal plain.—More than the normal precipitation occurred at a few scattered stations, but generally there was a deficiency. The average from 31 stations was 3.45 inches, about 0.8 inch below the normal.

Monthly precipitation and departures from the normal for the various States and parts of States, in inches are reported as follows: Colorado area, 1.10, −0.98; New Mexico area, 2.74, +1.25; Texas area, 3.02, −2.16; Kansas area, 3.47, −0.78; Oklahoma, 2.61, −3.80; Missouri area, 0.87, −4.08; Tennessee area, 1.35, −2.75; Arkansas, 1.11, −4.28; Mississippi area, 1.73, −2.68; Louisiana, 2.82, −1.40.

SNOWFALL.

The snowfall during the month was confined to the more elevated portions of the Colorado and New Mexico areas, except that a trace was recorded at 1 station in north-central Kansas. The amounts ranged from a trace to 11 inches, but owing to the high temperatures none of this remained upon the ground sufficiently long to be of use for purposes of irrigation. The average snowfall, in inches, for the various States and parts of States, derived from the records of such stations as reported snow, is as follows: Colorado area, 20 stations, 2.8 inches; New Mexico area, 10 stations, 1.4 inches; Kansas area, 1 station, trace.

RIVERS.

Only slight changes occurred in the Red River proper, but the Washita in Oklahoma rose rapidly during the closing days of the month as the result of heavy rains over the upper portion of that watershed.

There was a decided rise in the Canadian River during the latter part of the month due to heavy rains at its headwaters and over the Texas Panhandle and northwestern Oklahoma.

No decided rise occurred in the Cimarron during the month.

During May the volume of water discharged by the Arkansas in its upper reaches in Colorado was very close to normal. On the 2d a change from the low stage that prevailed throughout April began and lasted for a few days. Another rise was in progress at the close of the month. The Arkansas River continued low in Kansas, Oklahoma, and Arkansas. At Little Rock the water fell steadily from a stage of 9 feet on the 1st to 1.5 feet on the 24th, this being the lowest recorded in May during the last 32 years. The river was not navigable during the second and third decades.

Relatively high stages prevailed in the upper White River during the first decade, after which there was a steady fall and low stages prevailed at the close of the month. The lower White was 28.6 feet at Clarendon on May 1, after which there was a steady fall to 15 feet on the 31st.

There was a steady fall in the upper Ouachita at Camden from 31.4 feet on the 1st to 5.8 feet on the 29th. The lower Ouachita remained nearly stationary at Monroe, with stages ranging from 29 to 36 feet.

Below St. Louis high water prevailed in the Mississippi River at the opening of the month. At Memphis, Tenn., and Helena, Ark., there was a steady fall during the month, but the rise in progress at the close of April continued during the greater part of the first decade at stations below Arkansas City, after which there was a steady fall. The water was above the flood stage at Memphis on the 1st; Helena, 1st–2d; and Arkansas City, 1st–6th. From Vicksburg to the Gulf no flood stages occurred.

NOTES.

Fort Union, N. Mex. (M. C. Needham).—Range and crop conditions are very satisfactory. The hail of the 13th did considerable damage at this station, breaking window glass and shingles. Many young calves were killed during the storm.

Rociada, N. Mex. (Alice Blake).—Heavy hailstorms and rains passed near this station on the 14th and 29th.

New Mexico (C. E. Linney, section director).—Killing frosts occurred quite generally on May 1 and 11. Many stations reported hail on the 13th, 14th, 28th, and 29th.

Oklahoma (J. Pemberton Slaughter, section director).—Weather conditions were decidedly unfavorable during May, there being less than half the normal rainfall. Clear skies and high day temperatures prevailed, except during the first few days of the month.

Wichita, Kans.—The drought which has continued with varying intensity since February was relieved by good rains during the latter part of the month.

Missouri (George Reeder, section director).—Over considerable areas in southern Missouri no rain has occurred during six consecutive weeks. Pastures are brown, meadows dried up, the oat crop is a total failure, and wheat is badly damaged. The berry crop is very poor, and the melons have suffered as a result of the drought. Corn, where up, is looking well.

Arkansas (H. F. Alciatore, section director).—Unseasonably cold weather prevailed during the first week in May. The weather during the last 10 days of the month was abnormally warm, the maximum temperature for the State, 101°, surpassing all previous records. The precipitation was the smallest of record for May during the last 21 years.

Canton, Miss.—The high temperatures of the closing week and the light rainfall for the month broke all previous May records.

TABLE 1.—*Climatological data for May, 1911. District No. 7, Lower Mississippi Valley.*

Stations.	Counties.	Elevation, feet	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																			
Blaine	Baca	3,935	19	63.6	+ 2.7	95	24	31	1	47	2.86	+ 0.72	0.95	0	8	10	12	9	se.	M. M. Myers.
Buena Vista	Chaffee	7,955	11	47.7	.....	78	27†	20	2†	54	0.20	.....	0.20	0	1	.....	.....	.....	ne.	C. A. Short.
Calhan	El Paso	6,700	4	54.6	.....	79	6†	27a	1†	38a	2.06	.....	1.39	T.	10	20	5	6	sw.	H. B. Rice.
Canon City	Fremont	5,343	23	60.4	+ 1.2	88	5†	32	2	52	0.34	− 1.53	0.15	0	4	24	6	1	n.	G. C. Sherwood.
Colorado Springs	El Paso	6,098	31	55.0	+ 1.0	80	18	28	2†	40	0.65	− 1.75	0.39	0	6	11	14	6	.....	Colorado College.
Cripple Creek	Teller	9,396	10	.....	.....	.....	.....	.....	.....	.....	0.57	− 1.59	0.25	2.0	5	.....	.....	.....	.....	F. G. Willis.
Cuchara Camps	Huerfano	8,200	2	.....	.....	.....	.....	.....	.....	.....	1.71	.....	0.64	8.0	7	24	4	3	sw.	George A. Mayes.
Eads	Kiowa	4,209	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Lauck.
Fairview	Custer	9,500	2	.....	.....	.....	.....	.....	.....	.....	1.13	.....	0.57	8.0	3	18	13	0	ne.	Elizabeth L. Gray.
Fremont Experiment Station.	El Paso	8,850	1	45.9	.....	70	30	20	2	37	0.93	.....	0.26	0.5	6	22	5	4	w.	U. S. Forest Service.
Garfield	Chaffee	9,510	1	.....	.....	.....	.....	.....	.....	.....	0.85	.....	0.27	1.0	7	24	5	2	.....	Lloyd N. Felton.
Hamps	Elbert	5,400	18	55.5	+ 2.1	86	18	24	11	49	2.17	+ 0.20	1.86	0	5	18	7	6	s.	W. Hamp.
Hermit Lake	Custer	10,000	1	.....	.....	.....	.....	.....	.....	.....	1.64	.....	0.33	11.0	10	16	12	3	sw.	John E. Graham.
Hoehne (near)	Las Animas	5,700	19	58.8	+ 1.8	90	25	27a	11	48a	0.81	− 0.99	0.38	0	3	23	7	1	sw.	S. W. De Busk.
Holly	Prowers	3,380	16	65.6	+ 5.5	96	24	29	1	41	0.97	− 0.89	0.75	0	4	18	5	8	se.	Holly Sugar Co.
La Junta	Otero	4,052	.....	.....	.....	.....	.....	.....	.....	.....	1.53	.....	0.65	0	4	23	5	3	e.	Fred B. Mason.
Lake Moraine	El Paso	10,265	17	44.1	+ 4.3	66	18	16	2	38	1.43	− 1.85	0.39	5.5	8	12	11	8	sw.	Clyde C. McReynolds.
Lamar	Prowers	3,592	21	68.1	+ 5.3	99	8†	31	2	48	1.61	− 0.26	1.25	0	4	19	5	7	s.	J. T. Lawless.
Las Animas	Bent	3,899	43	65.7	+ 3.9	94	18†	32	11	49	1.50	− 0.35	0.73	0	6	12	6	13	s.	F. M. Tague.
La Veta Pass	Costilla	9,000	1	.....	.....	.....	.....	.....	.....	.....	1.17	.....	0.30	0.5	7	10	14	7	w.	Marine D. Wright.
Leadville	Lake	10,248	15	41.2	+ 1.5	67	31	17	11	39	0.70	− 0.45	0.38	4.2	6	8	21	2	s.	U. S. Weather Bureau.
Limon (near)	Elbert	5,360	4	55.7	.....	86	18†	24	1	49	1.49	.....	1.42	0	4	17	9	5	s.	F. L. Palmer.
Madrid	Las Animas	.....	1	.....	.....	.....	.....	.....	.....	.....	1.13	.....	0.66	0	6	.....	.....	.....	.....	Thos. Sawyers.
Marshall Pass	Saguache	10,846	8	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	T.	0	14	6	1	w.	Wm. D. Lillard.
Monument	El Paso	7,200	.....	50.1	.....	77	18	20	1†	44	.....	.....	.....	.....	.....	13	7	11	sw.	U. S. Forest Service.
North Lake	Las Animas	8,700	19	.....	.....	.....	.....	.....	.....	.....	0.48	− 1.76	0.24	3.5	5	26	4	1	nw.	James W. Ingmire.
Pueblo	Pueblo	4,734	23	61.2	+ 1.7	88	18	31	2	43	0.40	− 1.44	0.18	0	5	11	14	6	se.	U. S. Weather Bureau.
Rocky Ford (near)	Otero	4,177	22	64.6	+ 4.4	93a	23	29a	2	49a	0.65	− 1.23	0.31	0	3	21	8	2	w.	P. K. Blinn.
St. Elmo	Chaffee	9,500	2	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.34	T.	7	16	15	0	sw.	Daniel Clark.
Salida	do	7,035	12	52.0	+ 0.1	79	23	23	2†	47	0.11	− 0.85	0.05	T.	4	29	2	0	w.	M. D. L. Buell.
Santa Clara	Huerfano	8,252	16	51.9	+ 1.6	80	30	23	2†	46	1.51	− 1.53	0.66	2.8	8	9	21	1	.....	Lincoln G. Morris.
Sheridan Lake	Kiowa	4,065	9	67.4d	.....	98	24	36	3	54d	1.34	.....	0.90	0	4	.....	.....	.....	.....	Howard Gamble.
Stonewall	Las Animas	8,000	5	.....	.....	.....	.....	.....	.....	.....	1.36	.....	0.32	1.5	8	7	11	13	.....	G. A. Storz.
Trinidad	do	5,994	15	.....	.....	.....	.....	.....	.....	.....	0.18	− 1.65	0.05	0	7	21	8	2	.....	Mrs. M. H. Butler.
Victor	Teller	10,100	7	48.1	.....	68	19	23	1†	38	0.72	.....	0.44	T.	3	21	10	0	e.	Fred Jones.
Vilas	Baca	3,935	20	.....	.....	.....	.....	.....	.....	.....	3.18	+ 1.08	1.25	0	6	14	13	4	sw.	Carrie Konkel.
Wayne	El Paso	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.18	.....	1.83	0	4	20	6	5	sw.	J. C. Groff.
Westcliffe	Custer	7,864	17	52.0	+ 3.3	78	16†	18	20	46	0.61	− 0.91	0.25	0	4	5	17	9	sw.	Zack Jordan.
Winfield	Chaffee	9,765	1	.....	.....	.....	.....	.....	.....	.....	0.61	.....	0.14	2.0	10	4	25	2	w.	John G. Payne.
Woodman Sanatorium	El Paso	.....	.....	55.2	.....	80	18	24	2	39	0.38	.....	0.15	0.6	6	16	9	6	se.	Dr. J. E. White.
Wortman	Lake	11,250	10	.....	.....	.....	.....	.....	.....	.....	0.63	− 2.47	0.15	5.0	5	0	25	6	nw.	Geo. C. Wortman
New Mexico.																				
Abbott	Mora	5,771	2	.....	.....	92	23	38	1	.....	2.60	.....	1.55	0	6	15	7	9	s.	Agent, E. P. & S. W. R. R.
Albert	Union	4,700	20	65.3	+ 0.9	89	24	32	1	44	3.40	+ 1.41	1.60	0	5	.....	.....	.....	w.	Andrew Knell.
Aurora	Colfax	8,849	2	.....	.....	.....	.....	.....	.....	.....	2.92	.....	0.82	4.0	11	0	23	8	nw	Miss J. Lucero.
Bell Ranch	San Miguel	4,500	12	66.1	.....	93	24†	35	1	47	4.86	+ 2.85	3.13	0	8	8	19	4	sw.	C. M. O'Donel.
Black Lake	Colfax	8,348	2	.....	.....	.....	.....	.....	.....	.....	2.49	.....	0.71	4.0	7	6	14	11	w.	Ralph T. Martinez.
Cabeza	San Miguel	5,406	2	.....	.....	.....	.....	.....	.....	.....	2.97	.....	1.46	0	6	2	24	5	sw.	Agent, E. P. & S. W. R. R.
Campana	do	4,493	2	.....	.....	.....	.....	.....	.....	.....	3.40	.....	1.15	0	6	3	19	9	sw.	Do.
Chacon	Mora	9,000	2	.....	.....	.....	.....	.....	.....	.....	2.13	.....	1.02	2.0	7	6	19	6	w.	Alfred Lucero.
Cimarron (near)	Colfax	6,385	7	57.3	.....	84	24	24	1	45	2.61	.....	0.62	0	10	12	9	10	se.	Wm. French.
Clayton	Union	5,178	6	63.2	.....	88	31	31	1	40	3.66	.....	1.24	0	7	18	10	2	w.	Dr. W. W. Chilton.
Clovis	Curry	4,129	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. R. Worrall.
Cuervo	Guadalupe	4,849	2	66.4	.....	90	22	36	1	43	1.03	.....	0.91	0	4	15	15	1	s.	Agent, E. P. & S. W. R. R.
Dawson	Colfax	6,296	2	.....	.....	.....	.....	.....	.....	.....	2.43	.....	1.00	0	8	4	17	10	.....	Do.
Elizabethtown	do	8,465	5	45.4	.....	75	30	11	11†	58	1.80	.....	0.61	2.8	9	15	10	6	sw.	Miss M. Carrington.
Folsom	Union	6,399	12	57.6	+ 2.4	84	24	20	1	50	2.79	+ 0.17	1.17	T.	7	14	15	2	sw.	David Rope.
Fort Union	Mora	6,835	51	53.8	− 2.8	80	13†	21	1	45	3.30	+ 1.66	1.15	0	11	19	6	6	sw.	M. C. Needham.
Hayden	Union	4,444	2	64.8	.....	94	23	26	1	41	2.98	.....	0.82	0	8	10	18	3	sw.	James B. Dickson.
Johnsons Park	Colfax	6,722	2	.....	.....	.....	.....	.....	.....	.....	3.35	.....	1.13	T.	10	11	13	7	sw.	A. J. Meloche, jr.
Kappus	Quay	4,000	.....	.....	.....	.....	.....	.....	.....	.....	3.30	.....	2.40	0	7	.....	.....	.....	.....	Anthony Kappus.
Lake Alice	Colfax	7,160	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Raton Water Co.
Logan	Quay	3,851	5	68.2	.....	95	26	28	29	48e	4.50	.....	3.46	0	5	22	9	0	sw.	John B. Reneau.
Los Alamos	San Miguel	6,789	6	.....	.....	.....	.....	.....	.....	.....	2.44	.....	2.10	0	9	.....	.....	.....	.....	Antonio Pacheco.
Lykins (near)	Roosevelt	5,000	1	.....	.....	.....	.....	.....	.....	.....	2.66	.....	1.80	0	6	19	11	1	se.	J. G. Buchanan.
Maxwell (near)	Colfax	5,894	4	.....	.....	.....	.....	.....	.....	.....	2.06	.....	1.32	0	6	.....	.....	.....	.....	Dan N. Jackson.
Melrose	Curry	4,400	3	.....	.....	.....	.....	.....	.....	.....	2.25	.....	0.70	0	6	.....	.....	.....	.....	Dr. B. M. Porter.
Miami Ranch	Colfax	6,000	3	59.8	.....	85	30	32	21	43	2.61	.....	1.78	0	4	10	18	3	sw.	Farmers Development Co.
Montoya	Quay	4,335	2	.....	.....	.....	.....	.....	.....	.....	0.46	.....	0.25	0	4	7	14	10	s.	Agent, E. P. & S. W. R. R.
Mount Dora (near)	Union	5,600	1	.....	.....	82	27	35	1	.....	2.42	.....	1.10	0	7	14	9	8	sw.	Edwd. F. Grygla.
Nara Visa	Quay	4,225	5	66.4	.....	92	9†	31	1	39	2.83	.....	1.34	0	7	22	7	2	sw.	Geo. Bringle.
Ocate	Mora	7,500	.....	.....	.....	.....	.....	.....	.....	.....	3.42	.....	2.36	T.	6	6	12	13	w.	Mrs. John R. Strong.
Optimo	do	6,400	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. K. Odell.
Pasamonte	Union	.....	1	.....	.....	.....	.....	.....	.....	.....	2.33	.....	0.82	0	7	17	5	9	sw.	J. J. Heringa.
Pleasant View	Mora	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. W. Boulware.
Portales	Roosevelt	4,004	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Portales Irrigation Co.
Raton	Colfax	6,660	13	58.2	+ 1.3	85	24	25	1	40	2.79	+ 0.94	0.88	0.1	12	18	7	6	s.	Prof. R. C. Crumm.
Rociada	San Miguel	8,200	7	53.3	.....	79	10†	22	1	44	1.76	.....	0.50	1.0	10	15	14	2	w.	J. Ernest Dailey.
Rosebud	Union	4,500	.....	.....	.....	.....	.....	.....	.....	.....	2.76	.....	0.69	0	7	.....	.....	.....	.....	H. A. Nachtrieb.
Roy	Mora	5,884	2	.....	.....	.....	.....	.....	.....	.....	3.36	.....	1.85	0	8	3	16	12	w.	Agent, E. P. & S. W. R. R.
San Jon	Quay	4,200	4	67.8	.....	92	24	33	1	37	2.26	.....	1.71	0	4	21	5	5	sw.	Jesse T. White.
Solano	Mora	5,622	2	60.6	.....	85	25	29	2	43	3.70	.....	1.73	0	7	14	11	6	sw.	F. M. Hughes.
Springer	Colfax	5,857	15	62.2	+ 3.2	90	23†	28	1	52	2.24	+ 0.48	1.00	0	9	21	8	2	w.	Agent, A., T. & S. F. R. R.
Taylor	do	5,661	2	.....	.....	.....	.....	.....	.....	.....	2.80	.....	1.40	0	9	1	18	12	sw.	Agent, E. P. & S. W. R. R.
Trementina	San Miguel	5,000	3	.....	.....	.....	.....	.....	.....	.....	2.97	.....	1.08	0	5	11	15	5	se.	Miss Alice Blake.
Tucumcari	Quay	4,194	6	68.2	.....	92	25	33	1	39	0.92	.....	0.60	0	5	20	10	1	sw.	John F. Seaman.
Valley	Union	5,000	6	.....	.....	.....	.....	.....	.....	.....	6.15	.....	3.70	0	6	21	6	4	s.	Miss M. L. Payne.
Vance (near)	do	.....	.....	.....	.....	.....	.....	.....	.....	.....	4.40	.....	1.52	0	8	13	13	5	sw.	C. E. Anderson.
Vermejo Park	Colfax	7,600	6	52.0	.....	78	24	19	1	50	1.03	.....	0.30	T.	5	12	7	12	w.	H. W. Adams.
Wagon Mound (near)	Mora	6,300	2	56.7	.....	84	24	21	1	46	4.35	.....	1.77	0	9	17	8	6	sw.	Guy L. Barnes.
Texas.																				
Amarillo	Potter	3,676	19	65.6	+1.3	92	9	36	1	39	5.88	+2.21	2.90	0	8	15	14	2	se.	U. S. Weather Bureau.
Archer City	Archer	.....	1	.....	.....	.....	.....	.....	.....	.....	0.29	.....	0.29	0	1	21	9	1	s.	Chas. H. Thuman.

TABLE 1.—*Climatological data for May, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Continued.																				
Arthur City	Lamar	590	19	.....	.....	.....	.....	.....	.....	.....	0.65	−5.23	0.35	0	4	25	1	5	.....	V. V. Bright.
Bonham	Fannin	566	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. A. Lovelace.
Canadian	Hemphill	2,339	3	66.3	.....	94	9	36	22	52	3.84	.....	1.85	0	6	17[b]	9[b]	3[b]	s.	Canadian Academy.
Childress	Childress	1,869	18	.....	.....	.....	.....	.....	.....	.....	1.50	−1.50	1.00	0	2	15	8	8	s.	W. E. Davis.
Chillicothe	Hardeman	1,406	3	.....	.....	.....	.....	.....	.....	.....	1.93	.....	0.89	0	7	.....	.....	.....	.....	A. B. Conner.
Clarendon	Donley	2,719	6	69.0	.....	95	9†	37	1	48	5.31	.....	2.27	0	8	18	0	13	se.	Whitfield Carhart.
Clarksville	Red River	442	11	73.8	+1.7	100	31	43	1	43	2.19	−4.59	1.42	0	3	22	7	2	.....	J. W. O'Neill.
Claude	Armstrong	3,397	6	.....	.....	.....	.....	.....	.....	.....	5.62	.....	2.04	0	6	.....	.....	.....	.....	Ft. Worth & Denver City Ry.
Dalhart	Dallam	3,998	6	65.5	.....	93	9	30	1	45	3.37	.....	0.83	0	8	11	5	15	sw.	F. L. Kennard.
Denison	Grayson	.....	3	.....	.....	.....	.....	.....	.....	.....	1.97	.....	0.85	0	4	22	4	5	s.	E. B. Wilson.
Finley	Bowie	.....	1	.....	.....	.....	.....	.....	.....	.....	1.49	.....	0 83	0	2	26	2	3	s.	Robt. L. Smith.
Henrietta	Clay	915	19	74.4	+3.2	104	19	42	1†	50	0.13	−4.35	0.05	0	3	13	12	6	s.	C. K. Brown.
Hereford	Deaf Smith	3,750	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. C. Elliott.
Lewis Ferry	Bowie	.....	2	.....	.....	.....	.....	.....	.....	.....	2.18	.....	1.10	0	2	22	0	9	s.	P. G. Ruff.
Memphis	Hall	2,067	6	69.8	.....	92	11†	41	2	41	5.85	.....	1.90	0	7	14	8	9	sw.	Ft. Worth & Denver City Ry.
Miami	Roberts	2,743	5	69.1	.....	95	23	38	2	43	5.07	.....	1.83	0	8	18	5	8	s.	J. E. Kinney.
Mobeetie	Wheeler	.....	17	.....	.....	.....	.....	.....	.....	.....	4.50	+0.83	1.60	0	5	18	3	10	s.	Dr. W. J. Joss.
Nazareth	Castro	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. P. A. Kaelin.
Ochiltree	Ochiltree	.....	3	.....	.....	.....	.....	.....	.....	.....	3.90	.....	1.00	0	8	.....	.....	.....	.....	S. J. Allen.
Pampa	Gray	3,226	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. E. Finley.
Paris	Lamar	592	22	72.2	+1.1	99	31	44	1†	37	3.31	.....	1.56	0	5	20	6	5	se.	Robert A. Miller.
Plemons	Hutchinson	.....	4	65.8	.....	95	9	32	1	45	5.51	.....	3.09	0	9	17	6	8	se.	C. S. Soloman.
Quanah	Hardeman	1,563	6	73.0	.....	98	10†	41	1	37	1.50	.....	0.50	0	4	14	5	12	s.	Wm. H. Crawford.
Ringo Crossing	Hopkins	.....	1	.....	.....	.....	.....	.....	.....	.....	1.57	.....	0.67	0	3	17	5	9	sw.	H. J. Palmer.
Romero	Hartley	.....	1	66.0	.....	94	25	29	1	45	3.51	.....	1.87	0	8	13	16	2	s.	R. S. Chamberlain.
Sherman	Grayson	745	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. A. Gibbs.
Texline	Dallam	4,694	6	.....	.....	.....	.....	.....	.....	.....	6.53	.....	3.00	0	6	.....	.....	.....	.....	Ft. Worth & Denver City Ry
Tulia	Swisher	3,501	10	66.2	.....	90	9†	33	1	42	1.75	−2.46	1.26	0	5	9	20	2	s.	Lou Mulhall.
Wichita Falls	Wichita	958	4	.....	.....	.....	.....	.....	.....	.....	0.19	.....	0.18	0	2	26	2	3	s.	R. A. Thompson.
Winfield	Titus	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.92	.....	1.60	0	2	23	4	4	s.	J. C. Bostick.
Kansas.																				
Alden	Rice	1,684	1	.....	.....	.....	.....	.....	.....	.....	3.16	.....	0.75	0	11	.....	.....	.....	s.	L. B. Walt.
Anthony	Harper	1,329	14	67.5	.....	95	24†	35	2	47	6.75	+ 2.37	2.51	0	8	8	12	11	sw.	R. H. Beebe.
Ashland	Clark	1,951	23	67.1	+ 1.5	96	9	34	1	50	5.55	+ 2.41	1.07	0	14	15	13	3	s.	C. W. Carson.
Burlington	Coffey	1,010	18	68.2	+ 1.9	95	24†	30	2	39	2.02	− 2.87	0.44	0	8	1	29	1	s.	O. E. Sanford.
Chanute	Neosho	940	7	68.2	.....	94	19	31	2	38	4.04	.....	1.28	0	8	14	14	3	sw.	C. W. Brown.
Cimarron	Gray	2,700	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Fred Mallonee.
Coldwater	Comanche	2,090	14	66.0	0.0	91	9†	32	1	41	5.72	+ 2.74	1.30	0	11	16	8	7	s.	J. L. Stanley.
Columbus	Cherokee	898	21	69.2	+ 3.3	94	26†	33	2	41	1.14	− 5.20	0.52	0	8	21	7	3	sw.	O. E. Skinner.
Coolidge	Hamilton	3,348	14	64.8	+ 1.4	98	24	28	1	52	1.15	− 1.23	0.70	0	3	12	15	4	se.	W. R. Padley.
Cottonwood Falls	Chase	1,234	7	68.2	.....	95	24†	29	2	46	3.08	.....	1.76	0	9	16	6	9	s.	E. B. Greene.
Council Grove	Morris	1,234	2	67.4	.....	94	24	28	2	40	2.23	.....	1.07	T.	9	13	12	6	sw.	J. P. Blackledge.
Cunningham	Kingman	1,680	27	66.0	+ 0.9	94	10	32	2	45	5.19	+ 1.74	1.35	0	10	9	16	6	s.	W. H. Morton.
Dodge City	Ford	2,513	37	64.4	+ 0.9	93	9	30	1	41	3.95	+ 0.61	1.53	0	17	10	16	5	s.	U. S. Weather Bureau.
El Dorado	Butler	1,291	9	68.2	.....	94	24	32	2	45	5.14	.....	2.69	0	9	15	12	4	s.	W. Y. Miller.
Ellinwood	Barton	1,790	36	65.1	+ 0.8	93	10	29	2	40	3.54	+ 0.10	0.63	0	14	5	17	9	sw.	Martin Musil.
Emporia	Lyon	1,138	30	67.4	+ 2.5	94	24	32	2	40	4.53	− 0.53	1.80	0	9	12	14	5	s.	W. H. Boyles.
Eureka	Greenwood	1,079	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. C. Peffer.
Fall River	do	925	15	69.2	+ 4.3	95	24	32	2	48	1.32	− 4.04	0.25	0	11	19	10	2	s.	J. McDaniel.
Fargo	Seward	.....	1	.....	.....	.....	.....	.....	.....	.....	5.51	.....	2.50	0	5	10	12	9	s.	N. B. Swink.
Fredonia	Wilson	864	8	69.7	.....	96	24	33	2	39	2.37	.....	1.25	0	11	13	13	5	s.	B. W. Holmes.
Garden City	Finney	2,836	22	66.8	+ 3.4	97	9	28	1	44	2.91	+ 0.57	1.10	0	7	10	14	7	s.	B. F. Stocks.
Great Bend	Barton	1,850	2	.....	.....	.....	.....	.....	.....	.....	3.18	.....	0.92	0	11	17	5	9	s.	I. Pritchard.
Greensburg	Kiowa	2,235	4	64.5	.....	91	9†	31	1	41	4.18	.....	1.13	0	14	19	1	11	s.	C. C. Raymond.
Grenola	Elk	1,116	23	69.1	+ 3.2	95	24	32	2	48	4.27	− 0.59	1.55	0	11	8	18	5	sw.	W. H. Lawyer.
Howard	do	1,112	4	.....	.....	.....	.....	.....	.....	.....	2.02	.....	0.96	0	5	19	6	6	s.	J. W. Eby.
Hugoton	Stevens	.....	7	68.0	.....	100	9	30	2	58	6.09	.....	2.03	0	11	17	7	7	s.	E. M. Anderson.
Hutchinson	Reno	1,535	21	66.7	+ 1.4	95	10	29	2	46	2.43	− 1.23	1.18	0	10	16	3	12	sw.	E. S. Webster.
Independence	Montgomery	800	37	70.0	+ 2.5	95	24	33	2	46	2.32	− 2.49	0.78	0	9	11	12	8	s.	F. L. Kenoyer.
Iola	Allen	984	5	68.2	+ 3.7	92	24	33	2	37	2.63	− 2.42	1.73	0	11	12	17	2	s.	U. S. Weather Bureau.
Irene	Hamilton	3,440	1	66.2	.....	98	24	31	1	52	2.33	.....	0.88	0	5	12[b]	10[b]	7[b]	s.	N. M. Herbig.
Jetmore	Hodgeman	2,268	10	64.2	.....	95	9	29	1	50	3.37	+ 0.83	0.55	0	12	3	6	22	sw.	James Aiken.
Kingman	Kingman	1,504	3	67.9	.....	94	24	32	2	43	4.85	.....	1.59	0	11	11	12	8	sw.	B. B. Anawalt.
La Crosse	Rush	2,061	9	64.8	.....	93	9	27	2	47	3.80	.....	0.87	0	11	14[a]	10[a]	6[a]	se.	Rodney Torrey.
Lakin	Kearney	3,993	21	65.2	+ 2.4	99	9†	27	1†	57	0.32	− 1.56	0.25	0	3	14[a]	12[a]	4[a]	s.	C. H. Longstreth.
Larned	Pawnee	2,090	26	64.8	.....	94	9	30	2	42	5.20	+ 2.07	0.98	0	12	14	8	9	s.	H. H. Wolcott.
Lebo	Coffey	1,138	25	68.2	+ 3.3	95	24†	32	2	35	2.43	− 3.20	0.50	0	10	12	13	6	s.	J. J. Bowman.
Le Roy	do	990	2	.....	.....	.....	.....	.....	.....	.....	2.49	.....	0.80	0	8	22	1	8	s.	F. W. Schmitt.
Liberal	Seward	2,843	4	66.0	.....	96	9	31	2	47	2.72	.....	1.18	0	8	14	3	14	s.	Dr. R. T. Nichols.
Macksville	Stafford	2,032	22	63.8	+ 0.7	94	10	29	2	42	4.75	+ 1.59	1.45	0	10	8	9	14	s.	Mrs. Nelia Poling.
McPherson	McPherson	1,495	22	67.0	+ 2.9	96	24†	26	2	47	2.68	− 2.33	1.20	0	6	13	4	14	sw.	Ed. F. Haberlein.
Madison	Greenwood	1,074	10	67.2	.....	95	24	28	2	47	2.58	− 3.47	1.04	0	8	12	18	1	se.	C. A. David.
Marion	Marion	1,310	18	67.7	+ 1.7	94	24†	30	2	48	3.62	− 1.51	1.43	0	10	8	21	2	s.	Jerry Forney.
Medicine Lodge	Barber	1,259	18	66.2	0.0	96	10	33	2	46	4.99	+ 0.57	1.73	0	12	14	9	8	s.	S. P. Garrison.
Medora	Reno	1,484	2	.....	.....	.....	.....	.....	.....	.....	2.13	.....	0.60	0	11	10	2	19	s.	M. L. Rickenbrode.
Mount Hope	Sedgwick	1,410	14	.....	.....	.....	.....	.....	.....	.....	1.89	− 2.07	1.02	0	7	12	9	10	s.	H. N. Renfrew.
Neosho Rapids	Lyon	1,092	6	.....	.....	.....	.....	.....	.....	.....	3.01	.....	0.94	0	9	17	0	14	s.	W. H. McMullin.
Ness City	Ness	2,200	18	.....	.....	.....	.....	.....	.....	.....	5.51	+ 2.95	1.90	0	10	.....	.....	.....	.....	J. K. Barnd.
Newton	Harvey	1,454	14	68.0	+ 3.5	95	24†	30	2	48	4.66	− 0.69	1.93	0	10	14	11	6	sw.	H. A. Brush.
Norwich	Kingman	1,496	15	68.2	+ 3.3	95	24†	33	2	42	4.58	− 0.62	1.48	0	11	9	17	5	se.	N. I. Farris.
Oswego	Labette	899	17	69.7	+ 3.1	92	24†	34	2	42	1.64	− 3.88	0.89	0	9	16	13	2	sw.	Jas. M. Currigan.
Plains	Meade	2,766	1	66.8	.....	94	10	32	1	49	2.45	.....	0.55	0	9	9[a]	10[a]	11[a]	.....	E. J. Henning.
Pratt	Pratt	1,950	16	.....	.....	94	10	33	1	.....	4.43	− 0.13	1.34	0	7	.....	.....	.....	.....	A. J. Van Vranken.
Rome	Sumner	1,218	25	69.1	+ 3.5	98	24	33	2	52	6.06	+ 1.22	2.80	0	11	15	9	7	s.	D. M. Adams.
Sedan	Chautauqua	834	26	69.8	+ 3.7	95	24	33	2	46	1.39	− 3.85	0.55	0	8	13	14	4	s.	A. Y. Buckles.
Toronto	Woodson	1,040	14	69.0	+ 4.2	95	24	32	2	42	1.77	− 3.77	0.60	0	7	17	13	1	s.	M. A. Webb.
Ulysses	Grant	3,027	20	.....	.....	97	9	32	11	60	1.83	− 0.95	0.54	0	6	12[a]	1[a]	11[a]	s.	T. W. Marshall.
Walnut	Crawford	940	9	68.4	.....	93	24†	32	2	40	2.73	.....	0.82	0	8	21	8	2	sw.	R. C. Harian.
Wellington	Sumner	1,225	15	69.6	+ 3.4	97	24	32	2	49	6.98	+ 2.68	4.28	0	11	12	10	9	s.	E. O. G. Kelley.
Wichita	Sedgwick	1,377	24	67.6	+ 1.7	93	24	35	2	39	4.66	− 0.29	3.05	0	8	8	16	7	s.	U. S. Weather Bureau.
Winfield	Cowley	1,124	17	68.8	+ 3.0	95	25	33	1	46	4.20	− 0.84	2.50	0	5	21	0	10	s.	M. B. Light.
Yates Center	Woodson	1,068	32	68.2	+ 3.3	93	24†	31	2	41	2.29	− 2.98	0.51	0	8	9	19	3	s.	J. W. Tipton.

TABLE 1.—*Climatological data for May, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oklahoma.																				
Ada	Pontotoc	1,001	3	72.0	.....	95	31	40	1	42	2.76	.....	1.55	0	5	12	2	17	s.	R. J. Brooks.
Alva	Woods	1,350	6	70.6[e]	.....	95	....	34	....	37[e]	7.20	.....	3.75	0	6	17	3	6	s.	S. A. Stech.
Apache	Caddo	1,255	2	73.2	.....	99	31	38	1	48	1.79	.....	0.96	0	3	24	5	2	sw.	G. D. Teeter.
Arapaho	Custer	1,575	17	73.2	+ 4.8	100	31	39	1	41	2.71	− 2.66	1.33	0	6	28	1	2	s.	J. C. Brower.
Ardmore	Carter	872	10	73.4	+ 4.4	100	31	42	1	40	1.93	− 4.03	0.67	0	6	18	10	3	s.	H. T. Nisbett.
Arnett	Ellis	2,136	7	66.0	.....	95	10	36	1	42	5.51	.....	3.02	0	9	16	10	5	s.	C. H. Holmes.
Bartlesville	Washington	687	3	71.2	.....	96	24	37	2	45	2.04	.....	0.81	0	4	15	13	3	s.	Dr. A. P. Owens.
Beaver	Beaver	2,500	15	67.4	+ 1.3	95	23	34	2	50	3.12	− 0.41	0.65	0	9	18	10	3	s.	W. C. Frazer.
Blackburn	Pawnee	800	10	72.8	+ 5.4	97	24	40	2	43	2.04	− 7.42	0.48	0	9	24	2	5	sw.	John Landis
Cache	Comanche	1,350	5	71.0	.....	96	....	39	....	36[a]	1.40	.....	0.80	0	3	19	8	4	s.	Mrs. Frank Rush.
Calvin	Hughes	713	6	.....	.....	.....	.....	.....	.....	.....	2.48	.....	1.24	0	7	21	0	10	s.	Thomas Purcell.
Chandler	Lincoln	865	10	72.2	+ 4.4	97	31	40	1	41	0.83	− 7.57	0.31	0	4	18	3	10	s.	Chas. L. Kern.
Chattanooga	Comanche	1,150	5	74.2	.....	99	31	32	1	46	0.98	.....	0.68	0	3	12	12	7	s.	Squire Humble.
Chickasha	Grady	1,091	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. C. Good.
Cloud Chief	Washita	1,400	9	73.1	.....	100	23	37	1	52	2.12	.....	0.94	0	4	15	10	6	s.	J. P. Stutzman.
Durant	Bryan	643	10	71.5	+ 2.6	100	31	42	2	45	2.03	− 3.99	1.28	0	7	20	7	4	s.	Nelson Houk.
Eldorado	Jackson	1,456	4	73.6	.....	99	....	39	....	45[c]	1.73	.....	0.65	0	5	10	17	4	s.	T. W. Lanham.
El Reno	Canadian	1,400	20	72.6[d]	+ 5.3	98	....	38	....	45[d]	1.48	− 3.68	0.59	0	4	20	7	4	s.	Rose E. Walker.
Enid	Garfield	1,269	10	70.8	+ 4.9	97	23†	35	2	47	2.16	− 3.56	0.65	0	10	21	7	3	s.	Url B. Worcester.
Erick	Beckham	2,058	6	68.6	.....	99	10	35	1	50	6.51	.....	2.17	0	6	16	9	6	s.	A. W. Hanes.
Fairland	Ottawa	839	11	70.6	+ 4.2	99	29	37	2	44	1.49	− 4.16	0.76	0	5	13	12	6	s.	C. W. Prier.
Fort Gibson	Muskogee	556	6	.....	.....	.....	.....	.....	.....	.....	2.47	.....	0.76	0	7	19	2	10	s.	John T. Welsh.
Frederick	Tillman	1,293	5	74.1	.....	98	23†	38	1	45	1.29	.....	0.68	0	4	17	10	4	se.	B. B. Bradley.
Goodwell	Texas	3,300	1	67.0	.....	94	9†	35	1†	46	3.12	.....	1.10	0	10	14	10	7	s.	S. W. Black.
Guthrie	Logan	1,000	18	73.5	+ 4.1	99	25	39	1	52	0.97	− 5.10	0.35	0	4	20	3	8	s.	S. E. Snyder.
Guymon	Texas	3,133	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Mordt.
Harrington	Roger Mills	2,200	7	67.7	.....	97	10	37	1	42	4.65	.....	2.34	0	4	9	8	14	sw.	T. Compton.
Hartshorne	Pittsburg	700	12	72.9	+ 2.1	95	31	41	1†	34	2.82	− 4.01	2.53	0	3	24	3	4	s.	Robt. Holmes.
Healdton	Carter	900	17	72.8	+ 3.2	101	31	38	3	48	2.30	− 4.03	1.41	0	2	18	13	0	s.	C. H. Heald.
Helena	Alfalfa	1,396	3	72.3	.....	97	23	37	1	48	2.93	.....	0.98	0	10	18	10	3	s.	R. E. Ellis.
Hennessey	Kingfisher	1,166	16	73.2	+ 5.4	97	23†	40	1	50	0.95	− 4.21	0.37	0	6	10	16	5	s.	Mrs. M. C. Parks.
Hobart	Kiowa	1,396	8	73.2	.....	99	23	36	1	45	2.71	.....	1.13	0	5	12	15	4	sw.	Leland Turnbull.
Holdenville	Hughes	900	10	71.4	+ 3.7	95	18	40	1†	35	3.32	− 4.39	1.48	0	7	25	4	2	s.	Eula L. Rutherford.
Hooker	Texas	3,038	5	65.9	.....	96	9	33	2	42	3.81	.....	1.07	0	11	13	0	18	s.	H. N. Kelly.
Hurley	Cimarron	4,200	3	62.4	.....	93	24	28	1	48	3.87	.....	2.55	0	5	7	22	2	sw.	Dr. C. W. Meyers.
Idabel	McCurtain	474	3	71.2	.....	95	30†	43	2	40	0.70	.....	0.70	0	1	28	0	3	sw.	M. L. Henderson.
Jefferson	Grant	1,062	17	69.3	+ 2.2	97	24	33	2	39	3.29	− 1.70	0.86	0	7	19	10	2	s.	T. E. Beck.
Kenton	Cimarron	4,000	10	65.2	+ 3.5	92	18†	34	1†	50	3.95	+ 1.47	1.56	0	10	20	3	8	s.	Wm. M. Guy.
Kingfisher	Kingfisher	1,046	14	72.8	+ 5.0	97	23†	36	2	51	2.16	− 3.86	0.61	0	11	15	11	5	s.	J. C. Cross.
McAlester	Pittsburg	698	15	73.0	.....	95	31	41	1	42	2.72	− 4.18	2.25	0	3	22	3	6	s.	Wm. Noble.
McComb	Pottawatomie	1,200	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. McNair.
Mangum	Greer	1,585	18	72.0	+ 2.2	98	11	38	1	46	2.80	− 1.97	1.43	0	5	21	5	5	se.	F. D. Dodson.
Marlow	Stephens	1,292	10	72.6	+ 5.0	99	19	38	1	42	4.27	− 2.29	1.50	0	6	15	4	12	se.	Wm. B. Anthony.
Meeker	Lincoln	1,030	17	72.1	+ 4.1	98	23†	36	1	53	1.07	− 5.06	0.50	0	3	22	4	5	s.	Dr. J. H. Baugh.
Muskogee	Muskogee	614	12	71.9	+ 4.4	92	31	40	2	33	1.58	− 4.71	0.91	0	3	24	3	4	e.	J. Harry Randall.
Mutual	Woodward	.....	3	67.4	.....	95	24†	34	2	42	3.52	.....	2.15	0	3	18	3	10	s.	Thos. Martin.
Neola	Caddo	1,500	5	71.8	.....	96	23†	36	1	46	6.33	.....	5.79	0	5	13	18	0	s.	R. N. Schooling.
Newkirk	Kay	1,149	13	72.0	+ 5.1	100	24†	36	2	44	4.28	− 1.88	1.83	0	6	17	13	1	s.	P. H. Albright & Co.
Norman	Cleveland	1,171	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. E. Boyd.
Oakwood	Dewey	1,854	1	70.0	.....	95	23	37	1	46	1.33	.....	0.59	0	6	16	9	6	s.	Dr. F. P. Osborn.
Okeene	Blaine	1,194	7	71.4	.....	97	23	37	2	51	1.48	.....	0.78	0	7	23	5	3	s.	Dr. L. H. Murdoch.
Oklahoma	Oklahoma	1,247	20	71.2	+ 3.1	95	19	37	1	39	2.65	− 3.10	1.02	0	7	15	13	3	s.	U. S. Weather Bureau.
Okmulgee	Okmulgee	752	7	73.2[e]	.....	97	....	42	....	36[e]	4.88	.....	3.03	0	2	20	5	6	s.	J. L. Maynard.
Pauls Valley	Garvin	880	11	73.7	+ 3.2	98	23	40	2	48	3.40	− 4.05	2.76	0	4	24	6	1	sw.	A. M. Foss.
Pawhuska	Osage	918	11	73.2	+ 5.9	97	25	38	2	46	1.56	− 5.16	0.43	0	8	14	14	3	sw.	R. C. Block.
Perry	Noble	920	12	70.4	+ 3.7	98	25	37	2	41	3.46	− 3.07	0.85	0	11	17	9	5	s.	J. A. Douglass.
Ravia	Johnston	796	8	71.4	.....	98	27	41	1†	42	2.67	.....	0.96	0	5	25	1	5	s.	R. G. Guptill.
Sac and Fox Agency	Lincoln	900	18	73.2	+ 5.7	95	31	51	4†	34	1.82	− 3.91	1.07	0	3	24	5	2	s.	M. R. Gayle.
Shawnee	Pottawattomie	1,041	10	72.0	+ 4.1	96	23	37	1	44	0.85	− 5.56	0.27	0	7	10	18	3	s.	Mrs. Kate Chatman.
Snyder	Kiowa	1,356	4	73.4	.....	98	23	41	1	40	2.13	.....	1.80	0	3	16	15	0	se.	Dr. W. C. Woodard.
Stillwater	Payne	880	18	70.0	+ 2.8	95	24†	39	2	40	1.76	+ 4.29	0.38	0	8	15	8	8	s.	A. R. Evans.
Tulsa	Tulsa	700	22	72.5	.....	96	31	40	2	38	1.97	− 4.18	0.77	0	9	12	19	0	sw.	Dr. H. M. Hutchinson.
Vinita	Craig	698	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. C. Chamberlain.
Wagoner	Wagoner	588	14	71.5	+ 3.0	99	....	39	....	36[a]	1.46	− 4.98	0.83	0	4	23	3	5	s.	S. L. Hatfield.
Waukomis	Garfield	1,258	14	70.5	+ 3.3	97	25	35	2	46	2.30	− 2.70	0.65	0	9	15	10	6	sw.	R. C. Shades.
Waurika	Jefferson	988	1	74.6	.....	103	19	40	1	42	0.74	.....	0.57	0	2	19	10	2	s.	B. A. Swindler.
Weatherford	Custer	1,639	10	71.3	+ 4.8	98	23	37	2	49	2.46	− 3.23	0.83	0	6	15	9	7	s.	M. D. Reed.
Webbers Falls	Muskogee	479	12	71.6	+ 3.5	93	15†	41	1†	36	1.26	− 5.35	0.68	0	2	10	20	1	sw.	B. D. Boulineau.
Whiteagle	Kay	945	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Irvin G. Dillon.
Woodward	Woodward	1,893	8	68.2	.....	97	10	35	2	46	4.13	.....	1.79	0	10	24	7	0	s.	R. A. Boyle.
Missouri.																				
Belle	Maries	.....	20	69.4[d]	+ 4.7	94	....	33	....	40[d]	0.97	− 4.57	0.60	0	5	12[d]	12[d]	3[d]	s.[d]	A. J. Wofford.
Birch Tree	Shannon	1,200	18	69.4	+ 4.4	93	30	38	2	32	0.20	− 4.40	0.20	0	1	28	2	1	s.[b]	V. H. Kirkendall.
Cape Girardeau	Cape Girardeau	305	7	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.70	0	1	21	9	1	s.	D. L. Albert.
Caruthersville	Pemiscot	.....	20	72.5	+ 4.0	101	28	40	3	38	0.26	− 4.19	0.25	0	2	30	0	1	e.	H. E. Averill.
Cassville	Barry	.....	1	64.3	.....	90	30	30	2	45	0.60	.....	0.39	0	4	23	6	2	s.	Mrs. Zuma Bloomer.
Dean	McDonald	.....	13	67.7	+ 1.6	92	24†	31	2	46	1.12	− 5.62	0.42	0	6	23[f]	1[f]	1[f]	.....	H. E. Dean.
Doniphan	Ripley	440	8	70.1	.....	96	27†	38	3†	40	0.56	.....	0.33	0	3	25	2	4	s.	W. W. Martin.
Gano	Dent	.....	8	70.2	.....	96	29	35	2	41	0.99	.....	0.75	0	4	18	10	3	s.	A. C. Leech.
Goodland	Iron	900	7	66.2	.....	94	30	33	5†	52	0.24	.....	0.24	0	1	18	9	4	s.	F. M. Adams.
Greenville	Wayne	.....	18	69.2	+ 2.6	97	30	36	2†	40	0.60	− 3.36	0.35	0	2	20	11	0	s.	A. G. Templeton.
Hollister	Taney	1,000	2	69.9	.....	100	30	32	2	46	0.70	.....	0.40	0	2	25	0	6	s.	W. P. Chapman.
Ironton §§	Iron	925	34	67.7	+ 3.2	96	29	32	6	45	2.17	− 2.76	2.03	0	3	16	13	2	s.	W. H. Delano.
Jackson	Cape Girardeau	458	21	71.1	+ 6.0	99	30	37	5	38	0.32	− 3.96	0.20	0	3	14	13	4	s.	L. M. Bean.
Joplin	Jasper	979	33	71.2	.....	93	26	35	2	33	0.99	− 2.78	0.62	0	2	26	0	5	sw.	Miss Ruth Smith.
Koshkonong	Oregon	911	11	70.7	+ 5.0	93	29	35	2	31	0.73	− 4.46	0.28	0	5	15[a]	12[a]	3[a]	sw.[a]	J. W. Hitt.
Lamar §§	Barton	964	32	69.4	+ 3.7	93	24†	33	2	31	0.90	− 4.80	0.34	0	4	22	3	6	s.	E. H. Adams.
Marble Hill	Bollinger	420	20	69.4	+ 3.8	98	28†	35	5	40	0.78	− 3.74	0.40	0	3	21	9	1	s.	A. F. Hendrix.
Mountain Grove	Wright	1,490	13	67.5	+ 3.9	90	28	31	2	31	0.60	− 4.25	0.45	0	3	11	18	2	s.	Mo. Fruit Exper. Station.
Mount Vernon	Lawrence	1,480	32	68.9	+ 3.2	93	19†	29	2	44	1.74	− 3.98	1.44	0	4	22	7	2	sw.	J. R. White & Son.
Neosho	Newton	1,023	29	68.0	+ 1.8	92	27†	31	2	46	2.49	− 3.89	1.80	0	4	25	0	6	s.	W. O. Buck.
New Madrid	New Madrid	285	18	.....	.....	.....	.....	.....	.....	.....	0.10	− 4.69	0.08	0	2	24	3	4	s.	Miss Josie Smith.
Oakfield	Franklin	793	20	70.4	+ 4.8	94	25†	34	2	33	1.52	− 4.09	0.74	0	4	11	18	2	s.	E. E. Steines.
Olden	Howell	1,246	22	69.0	+ 3.4	94	30	34	2	34	0.72	− 4.42	0.40	0	4	23	7	1	s.	J. D. Evans.
Perryville	Perry	582	2	73.0	.....	93	29	38	3	28	0.74	.....	0.50	0	2	25	0	6	s.	Superintendent of Schools.

TABLE 1.—*Climatological data for May, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
***Missouri*—Continued.**																				
Rolla	Phelps	1,092	31	69.1	+ 5.7	92	25†	32	2	38	1.91	− 3.30	1.44	0	6	24	4	3	s.	Prof. P. J. Wilkins.
Springfield	Greene	1,350	23	68.2	+ 4.5	89	28	33	2	29	0.34	− 5.21	0.13	0	5	19	6	6	s.	U. S. Weather Bureau.
Steelville	Crawford	746	15	70.3[j]	.....	94[j]	24†	29[j]	2	45[j]	0.48	− 4.13	0.26	0	4	9[j]	6[j]	6[j]	se.[j]	Edwin Pumphrey.
Kentucky.																				
Blandville	Ballard	445	29	70.2	+ 3.7	94	28	39	3	30	0.62	− 3.91	0.38	.0	4	16	14	1	sw.	E. W. Horr.
Tennessee.																				
Arlington	Shelby	.....	29	71.3	+ 2.6	100	25†	42	3†	40	1.24	− 3.00	1.20	0	2	22	4	5	s.	A. Thomas B. Etheridge.
Bolivar	Hardeman	450	24	71.6	+ 3.7	98	28	40	3	38	1.17	− 2.71	0.76	0	2	25	1	5	s.	Miss Mary A. Smith.
Brownsville	Haywood	361	26	71.6	+ 3.0	98	28	42	6	33	1.09	− 2.83	0.84	0	2	20	8	3	s.	Miss Hattie N. Moses.
Covington	Tipton	311	24	71.6	+ 2.5	96	28	43	3	31	1.06	− 3.28	0.46	0	3	28	0	3	s.	James S. Ruffin.
Dyersburg	Dyer	310	28	72.7	+ 4.1	99	27†	42	3	35	0.20	− 3.95	0.20	0	1	27	2	2	se.	Miss Martha A. Sinclair.
Jackson	Madison	450	18	71.2	+ 2.5	102	27	38	7	40	2.90	− 1.22	1.81	0	3	28	1	2	s.	Shelby A. Robert.
Kenton	Obion	325	9	72.0	.....	100	28	41	3†	37	1.30	.....	0.61	0	5	25	4	2	s.	George S. Martin.
Memphis	Shelby	409	40	73.5	+ 2.8	97	28	46	3	26	0.20	− 4.14	0.20	0	1	20	7	4	sw.	U. S. Weather Bureau.
Milan	Gibson	440	28	70.8	+ 2.8	94	28	40	3	35	2.73	− 1.65	1.22	0	6	21	1	9	s.	Orlando F. Cantwell.
Trenton	....do	345	28	69.7	+ 2.4	100	29	38	3	40	1.96	− 1.98	0.80	0	5	26	5	0	s.	F. L. Dennison.
Union City	Obion	360	13	71.2	+ 3.2	....	....	38	3	....	0.70	− 4.23	0.50	0	2	24	7	0	.....	J. B. Kimzey.
Arkansas.																				
Alicia	Lawrence	.....	7	69.6	.....	94	26†	40	5	37	1.70	.....	1.70	0	1	26	4	1	s.	McCullough & Guelck.
Amity	Clark	250	19	71.2	+ 0.9	97	25	40	3†	40	1.62	− 4.95	1.50	0	3	22	7	2	sw.	Prof. S. M. Samson.
Arkadelphia (near)	....do	250	4	72.6	.....	99	29	44	2†	40	2.08	.....	1.80	0	2	24	5	2	sw.	J. A. Ross.
Arkansas City	Desha	145	28	.....	.....	.....	.....	.....	.....	.....	1.00	− 1.41	1.00	0	1	.....	.....	.....	.....	W. C. Blundell.
Batesville	Independence	271	6	.....	.....	.....	.....	.....	.....	.....	0.84	.....	0.62	0	2	.....	.....	.....	.....	Leila I. Teter.
Bee Branch	Van Buren	.....	19	69.6	+ 0.9	97	....	36	....	38[b]	0.65	− 4.40	0.65	0	1	.....	.....	.....	.....	J. E. Scanlan.
Benton	Saline	283	4	73.6[e]	.....	100	....	46	....	38[f]	0.50	.....	0.50	0	1	.....	.....	.....	.....	P. B. Jackson.
Bentonville	Benton	1,303	6	68.2	+ 1.8	92	30	35	2	35	0.87	− 4.35	0.48	0	4	20	8	3	s.	U. S. Weather Bureau.
Bergman	Boone	1,324	15	66.2	− 0.1	96	14	26	2	51	0.70	− 5.09	0.56	0	2	23	4	4	sw.	John T. Maxey.
Black Rock	Lawrence	259	7	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.62	0	2	.....	.....	.....	.....	S. J. Howe.
Brinkley	Monroe	226	25	71.3	+ 1.4	100	27†	39	2†	44	1.27	− 3.55	1.13	0	2	.....	.....	.....	.....	H. L. D. Whitson.
Calico Rock	Izard	361	7	.....	.....	.....	.....	.....	.....	.....	0.75	.....	0.50	0	2	.....	.....	.....	.....	W. H. Stoner.
Camden	Ouachita	158	26	71.6	− 0.1	99	30	41	6	38	1.47	− 3.14	0.70	0	4	.....	.....	.....	.....	R. H. Quarterman.
Centerpoint	Howard	470	11	72.1	+ 1.2	98	30	42	3	36	1.07	− 7.71	0.60	0	2	19	8	4	se.	J. M. Huddleston.
Clarendon	Monroe	171	7	.....	.....	.....	.....	.....	.....	.....	0.69	.....	0.53	0	2	.....	.....	.....	.....	Mrs. B. E. Bishop.
Conway	Faulkner	309	28	70.8	+ 1.2	96	29	41	2	37	1.07	− 4.30	0.94	0	3	22	8	1	se.	G. H. Burr.
Corning	Clay	293	19	70.8	+ 2.0	96	28†	38	5	37	1.07	− 3.52	0.64	0	3	17	10	4	s.	Jacob Brobst.
Dardanelle	Yell	330	25	70.8	.....	95	28	40	2	39	1.54	− 4.17	0.90	0	3	.....	.....	.....	.....	A. Bernard.
Dodd City	Marion	1,175	30	68.2[d]	+ 0.6	94	....	32	....	45[d]	0.40	− 5.52	0.40	0	1	.....	.....	.....	s.	Neal Dodd.
Eldorado	Union	.....	7	71.9	.....	98	30	43	6	35	1.45	.....	1.29	0	3	.....	.....	.....	.....	Jeff J. Babb.
England	Lonoke	.....	5	71.4	.....	98	....	40	....	39[d]	1.51	.....	0.85	0	3	.....	.....	.....	se.	J. C. Chenault.
Eureka Springs	Carroll	1,465	9	68.8	.....	92	28	33	2	36	1.15	.....	0.49	0	3	8	23	0	sw.	George W. Nicholds.
Fayetteville	Washington	1,451	22	69.4	+ 2.9	91	29	36	2	37	0.65	− 5.61	0.41	0	3	12	17	2	sw.	University of Arkansas.
Fordyce	Dallas	.....	.....	71.5	.....	96	30	43	3	37	1.74	.....	0.80	0	4	23	6	2	s.	A. Tredick.
Fort Smith	Sebastian	481	29	71.9	+ 2.2	93	28	42	1	31	1.56	− 3.35	1.40	0	4	18	10	3	e.	U. S. Weather Bureau.
Fulton	Hempsted	264	7	.....	.....	.....	.....	.....	.....	.....	1.30	.....	0.86	0	2	.....	.....	.....	.....	B. C. Logan.
Hardy	Sharp	643	13	70.5	+ 4.1	96	30	39	2	36	0.43	− 5.85	0.28	0	4	13	16	2	sw.	C. A. Caywood.
Helena	Phillips	182	26	72.0	+ 0.7	98	18	44	2	37	0.42	− 4.23	0.20	0	3	.....	.....	.....	.....	B. F. Modisett.
Hot Springs	Garland	600	5	70.6	.....	97	29	38	6	41	1.10	.....	0.70	0	3	.....	.....	.....	sw.	Hot Springs Water Co.
Huttig	Union	85	4	73.2	.....	98	28†	47	....	40[a]	0.80	.....	0.80	0	1	16	15	0	.....	C. A. Berry.
Jonesboro	Craighead	345	16	72.0	+ 0.9	101	28	37	3	43	0.45	− 3.88	0.45	0	1	13	16	2	s.	Benedictine Sisters.
Junction	Union	.....	18	72.0	+ 0.2	99	29†	42	3	38	1.37	− 2.27	1.37	0	1	26	3	2	sw.	J. A. Lowderback.
Lake Farm	Jefferson	195	4	71.4	.....	99	29†	40	1†	40	1.12	.....	1.12	0	2	20	11	0	sw.	R. H. Gillispie.
Lewisville	Lafayette	262	8	73.6	.....	98	....	44	....	37[c]	1.31	.....	1.00	0	2	.....	.....	.....	.....	F. W Youmans.
Little Rock	Pulaski	357	32	72.2	+ 1.8	94	29	44	2	28	0.82	− 4.28	0.78	0	2	17	12	2	sw.	U. S. Weather Bureau.
Lutherville	Johnson	775	14	69.3	+ 1.8	92	28†	37	2	36	1.50	− 4.62	0.78	0	4	20	8	3	sw.	G. H. Hentschel.
Malvern	Hot Spring	277	24	70.8	− 2.1	99	30	40	3	38	0.92	− 4.71	0.40	0	3	.....	.....	.....	.....	Miss L. C. Smith.
Mammoth Spring	Fulton	512	7	68.4	.....	96	30	34	5	42	0.57	.....	0.43	0	3	18	13	0	.....	F. Wallick.
Marked Tree	Poinsett	229	7	.....	.....	.....	.....	.....	.....	.....	0.22	.....	0.22	0	1	.....	.....	.....	.....	L. Smith.
Mena	Polk	1,100	25	70.0	+ 0.2	91	29†	40	1	33	2.02	− 4.32	1.49	0	3	25	5	1	sw.	R. R. St. John.
Newport	Jackson	231	27	71.6	+ 1.5	96	27†	40	6	34	2.01	− 2.24	1.85	0	2	.....	.....	.....	.....	Chas. Sprigg.
Ozark	Franklin	377	20	71.5	+ 0.5	92	15	42	2	29	1.42	− 4.87	0.94	0	3	23	6	2	e.	R. M. Adams.
Pine Bluff	Jefferson	215	23	72.2	+ 0.2	97	29†	44	6	35	0.65	− 4.15	0.53	0	3	27	0	4	s.	J. M. Hudson.
Pocahontas	Randolph	.....	19	71.0	+ 2.6	98	28	39	3	38	1.05	− 3.99	0.55	0	3	21	10	0	.....	Benedictine Sisters.
Pond	Benton	1,250	14	67.4	+ 1.9	90	30	32	2	41	0.91	− 5.65	0.62	0	3	6	24	1	sw.	A. F. Stevens.
Portland	Ashley	122	2	74.1	.....	99	29	50	7	33	1.38	.....	0.75	0	3	.....	.....	.....	.....	L. W. Gregory.
Prescott	Nevada	327	23	70.7	− 0.6	97	30	40	6	40	1.56	− 3.58	0.65	0	4	.....	.....	.....	.....	A. M. Ellsworth.
Rogers	Benton	1,385	20	68.0	+ 1.7	91	30	34	2	35	0.70	− 5.52	0.41	0	4	17	11	3	s.	Carl A. Starck.
Springbank	Miller	182	4	.....	.....	.....	.....	.....	.....	.....	1.44	.....	0.66	0	4	.....	.....	.....	.....	G. Field.
Stuttgart	Arkansas	495	24	71.6	+ 1.4	98	28†	43	2†	37	1.06	− 3.81	1.06	0	1	23	7	1	s.	H. A. Buerkle.
Subiaco	Logan	1,050	14	70.8	+ 1.2	93	25†	40	1	34	1.10	− 5.98	0.93	0	2	25	3	3	sw.	New Subiaco Abbey.
Swain	Newton	2,300	....	67.0	.....	85	29	33	2	27	1.08	.....	1.01	0	6	16	13	2	s.	George Paxton.
Texarkana	Miller	332	27	72.2	+ 0.7	94	30	45	3	30	1.78	− 2.16	0.81	0	4	.....	.....	.....	.....	D. E. Moore.
Warren	Bradley	304	16	72.2	+ 0.5	100	30	42	3†	39	0.89	− 3.44	0.89	0	1	.....	.....	.....	.....	W. J. Savage.
Whitecliffs	Little River	206	7	.....	.....	.....	.....	.....	.....	.....	1.59	.....	0.58	0	4	.....	.....	.....	.....	John E. Payton.
Wiggs	Garland	.....	18	68.9	− 0.4	96	30	36	3	40	1.48	− 4.74	1.11	0	3	19	11	1	sw.	S. D. Jester.
Wynne	Cross	250	3	71.6	.....	99	30	40	3†	40	0.65	.....	0.30	0	3	.....	.....	.....	.....	John Seals.
Mississippi.																				
Anguilla	Sharkey	107	3	73.2	.....	100	28	44	6	39	0.71	.....	0.71	0	1	19	11	1	ne.	E. W. Cook.
Austin	Tunica	200	15	72.0	+ 0.9	98	26†	42	3	39	0.39	− 3.90	0.22	0	3	27	2	2	s.	H. J. Irvine.
Batesville	Panola	230	24	72.4	+ 2.1	98	28†	42	2†	38	0.92	− 3.20	0.92	0	1	28	1	2	ne.	J. M. Cox.
Big Creek	Calhoun	.....	.....	71.8	.....	98	29†	41	2	40	5.43	.....	4.40	0	3	25	2	4	s.	J. P. Havens.
Byhalia	Marshall	390	2	.....	.....	.....	.....	.....	.....	.....	1.22	.....	0.66	0	3	23	6	2	sw.	Tallahatchie Drainage Com.
Canton	Madison	228	21	73.4	+ 1.4	99	29	46	6	38	0.07	− 3.67	0.05	0	2	13	18	0	se.	Dr. G. W. Smith-Vaniz.
Charleston	Tallahatchie	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. B. Burke.
Clarksdale	Coahoma	177	4	72.8	.....	98	28	44	2	38	0.24	.....	0.11	0	3	26	4	1	s.	A. C. Tuttle.
Coffeeville	Yalobusha	241	2	.....	.....	.....	.....	.....	.....	.....	0.75	.....	0.53	0	4	19	12	0	s.	Tallahatchie Drainage Com.
Corinth	Alcorn	470	23	71.9	+ 3.1	100	30	42	3	38	1.36	− 2.47	1.32	0	2	25	2	4	se.	M. A. Candler.
Crenshaw	Panola	187	2	.....	.....	.....	.....	.....	.....	.....	2.61	.....	1.87	0	4	21	9	1	sw.	Tallahatchie Drainage Com.
Denmark	Lafayette	.....	2	.....	.....	.....	.....	.....	.....	.....	1.91	.....	0.94	0	3	.....	.....	.....	.....	Do.
Duck Hill	Montgomery	.....	12	71.8	+ 1.3	100	30	39	6	39	0.84	− 3.40	0.38	0	3	26	3	2	w.	W. H. Eskridge.

TABLE 1.—*Climatological data for May, 1911. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Mississippi—Contd.																				
Edwards	Hinds	222	24	74.0	+ 0.3	98	30†	48	2	34	1.82	− 2.41	1.05	0	5	28	3	0	s.	E. F. Farr.
Enid	Tallahatchie		2								1.35		1.35	0	1					Tallahatchie Drainage Com.
Fayette	Jefferson	270	10	73.2	+ 0.5	98	28	43	6	37	1.23	− 2.85	0.88	0	2	21	9	1	se.	T. L. Darden.
Greenville	Washington	126	24	74.0	+ 2.0	98	27†	45	3	36	1.21	− 2.75	0.70	0	4	28	0	3	se.	F. L. Harbison.
Greenwood	Leflore	140	11	74.5	+ 2.7	103	28	46	2†	38	0.88	− 5.59	0.50	0	3	22	7	2	e.	J. H. Stephen.
Grenada	Grenada	124	2								0.60		0.60	0	1	27	4	0	se.	Tallahatchie Drainage Com.
Hernando	De Soto	391	23	73.2	+ 3.1	98	27†	42	2	34	1.70		1.70	0	1	22	8	1	ne.	W. F. Wood.
Hickory Flat	Benton	435	2								4.16		2.83	0	4	20	11	0	sw.	Tallahatchie Drainage Com.
Holly Springs	Marshall	600	24	71.6	+ 1.5	96	28†	42	2	27	3.62	− 0.38	1.69	0	4	24	2	5	se.	L. B. Mosby.
Kosciusko	Attala	430	21	72.7	+ 1.9	100	28	44	2	36	2.38	− 1.11	1.13	0	5	26	4	1	ne.	E. L. Lucas.
Lake Cormorant	De Soto	206	2								2.85		2.24	0	3	16	15	0	se.	Tallahatchie Drainage Com.
Lula	Coahoma	182	2								0.29		0.20	0	2	27	3	1		Do.
Malone	Marshall		2								6.69		6.25	0	4					Do.
Marks	Quitman	163	2								1.05		0.41	0	3					Do.
Natchez	Adams	206	23	73.4	− 0.5	99	30†	44	6	37	1.61	− 1.93	0.86	0	3	22	0	9	n.	F. L. Garrity.
New Albany	Union	398	2								2.31		0.90	0	4	26	5	0	n.	Tallahatchie Drainage Com.
Pontotoc	Pontotoc	475	22	71.2	+ 1.8	95	28†	41	6	34	2.44	− 1.13	1.00	0	4	20	11	0	se.	Dr. C. W. Bolton.
Port Gibson	Claiborne	116	23	72.4	+ 0.4	99	31	43	6	37	2.95	− 0.39	2.00	0	5	22	4	5	e.	H. H. Crisler.
Rosedale	Bolivar	143	3	71.8		97	28†	44	3	36	0.20		0.20	0	1	27	2	2	sw.	T. J. Murray.
Senatobia	Tate	284	2								1.60		1.03	0	2	25	2	4	sw.	Tallahatchie Drainage Com.
Shoccoe	Madison		8	72.8		100	27†	43	6	38	0.22	− 5.92	0.13	0	2	19	9	3	s.	J. C. Pitchford.
Suffolk	Franklin		10	74.1	+ 1.8	101	29†	47	6	36	1.24	− 4.51	0.82	0	4	18	9	4	n.	Prof. George H. Kent.
Swan Lake	Tallahatchie	148	6								2.15		1.80	0	2					B. F. Saunders.
Tchula	Holmes	130	6	74.2		100	28	46	6	34	1.00		0.70	0	3	9[b]	20[b]	0[b]	e.	Dr. M. P. Winkler.
University	Lafayette	502	18	73.2	+ 2.9	98	28	42	2	31	3.88	− 0.04	3.20	0	3	28	1	2	s.	Prof. J. H. Dorroh.
Utica	Hinds	287	7	72.4		98	28	43	6	34	0.70		0.60	0	3	20	5	6	se.	Dr. J. B. Dudley.
Vicksburg	Warren	247	40	74.4	+ 1.5	97	30	50	2	24	0.65	− 3.61	0.34	0	6	18	10	3	ne.	U. S. Weather Bureau.
Water Valley	Yalobusha	300	22	72.5	+ 1.8	98	28†	42	2†	38	1.65	− 2.92	1.45	0	2	25	6	0	e.	Miss Loula Erikson.
Woodville	Wilkinson	560	18	73.5	− 0.7	97	26†	46	6	31	1.74	− 2.77	0.60	0	8	22	9	0	se.	James E. Lee.
Yazoo City	Yazoo	116	17	73.0	− 0.9	99	28†	43	6†	38	2.24	− 1.35	0.92	0	5	23	4	4	e.	W. H. Courts.
Louisiana.																				
Abbeville	Vermilion	18	23	75.8	− 1.2	105	30	50	6	34	2.40	− 1.60	0.88	0	6	21	5	5	se.	C. J. Edwards.
Alexandria	Rapides	77	23	73.4	+ 0.1	97	30†	49	5	36	3.33	− 1.71	2.27	0	4	21	2	8	n.	Nellie Graham.
Amite	Tangipahoa	130	23	73.4	− 0.4	98	28†	48	8	36	4.77	− 0.40	2.00	0	7	15	15	1	n.	Lulu M. Wentz.
Baton Rouge	East Baton Rouge	60	23	75.7	+ 1.5	95	30	58	6	27[d]	3.06	− 1.70	1.52	0	6	25	3	3	ne.	Elmo M. Bott.
Burnside	Ascension	2	11	74.1	+ 0.5	97	29†	50	6†	33	4.00	− 2.43	1.96	0	4	17	7	7	ne.	C. S. McFarland.
Burrwood	Plaquemines	1	23	74.6	− 0.2	92	30	61	8	17	4.10	+ 1.25	3.44	0	6	28	1	2	ne.	Graham Myers.
Cades	St. Martin		1	75.6		98	30	54	6	29	3.81		2.00	0	6	26	3	2	s.	C. E. Smedes.
Calhoun	Ouachita	180	23	72.4	+ 0.4	100	30	41	6	40	1.29	− 2.98	0.90	0	2	20	11	0	sw.	N. Louisiana Exper. Station.
Cameron	Cameron	6	18	74.9	− 0.1	95	30	54	3	26	2.79	− 0.91	2.23	0	3	13	16	2	se.	State Biological Station.
Carrollton	Orleans	7	....	74.6		97	31	54	10†	33	3.00		1.20	0	4	27	3	1		Loyola College.
Cheneyville	Rapides	67	23	73.8	+ 0.3	98	30	45	6	38	2.30	− 2.23	1.20	0	5	23	2	6	w.	Walter I. Tanner.
Cinclare	West Baton Rouge		1	74.6		98	31	45	5	35	4.01		3.25	0	5	28	0	3	e.	Cinclare Central Factory.
Clinton	East Feliciana	113	23	73.1	− 0.5	96	29	49	8	32	4.26	+ 0.12	1.48	0	7	21	4	6	n.	John A. White.
Collinston	Morehouse	65	10	73.8	+ 1.0	99	30	46	3	40	0.65	− 4.77	0.65	0	1	22	8	1	s.	John B. Reily.
Covington	St. Tammany	39	19	74.8	+ 0.5	99	29	49	8	35	3.65	− 0.74	1.54	0	7	22	5	4	s.	Lucille Champagne.
Dodson	Winn		2	73.8		100	30	47	3†	37	2.13		1.83	0	2	25	6	0	e.	J. P. Lucas.
Donaldsonville	Ascension	33	23	75.8	+ 1.2	98	29	53	6†	32	7.43	+ 3.13	6.00	0	5	27	2	2	e.	John F. Park.
Farmerville	Union	177	23	71.3	− 0.7	....	....	44	2†	35	1.31	− 3.50	1.31	0	1	24	7	0	s.	W. P. Chandler.
Ferriday	Concordia		4	74.7		96	27†	41	6	40	1.75		0.60	0	4	27	1	3	s.	R. Z. Sclater.
Franklin	St. Marys	10	19	76.0	+ 0.3	99	30†	51	8	36	3.37	− 0.69	1.10	0	9	25	3	3	s.	J. M. Bonney.
Grand Cane	De Soto	302	17	68.7	− 3.5	99	30†	41	4	45	1.16	− 2.86	0.50	0	3	10	20	1	e.	J. Foster Provost.
Grand Coteau	St. Landry	93	23	74.8	+ 0.5	100	30	50	6	34	1.35	− 3.34	0.72	0	7	27	2	2	nw.	St. Charles College.
Hammond	Tangipahoa	44	19	74.1	− 0.1	99	29	48	8	38	3.04	− 0.04	1.95	0	5	23	8	0	se.	C. C. Carr.
Houma	Terrebonne		23	78.0	+ 2.8	94	31	59	9	29	2.80	− 0.78	1.70	0	5	25	0	6	e.	H. M. Foote.
Jena	Catahoula		....	74.0		101	31	44	6	38	2.67		1.90	0	2	23	6	2	s.	I. A. Wilbanks.
Jennings	Calcasieu	30	14	75.2	+ 1.5	100	30	51	6	33	6.78	+ 1.95	3.44	0	7	11	15	5	se.	J. F. Buch.
Lafayette	Lafayette	36	23	73.9	− 0.5	96	30†	52	6	31	2.14	− 1.99	1.10	0	6	20	6	5	n.	J. J. Davidson.
Lake Charles	Calcasieu	22	23	73.4	− 0.1	100	30†	52	8	40	1.35	− 2.61	0.80	0	5	24	0	7	e.	George Boudreaux.
Lakeside	Cameron	9	....	75.4	+ 0.9	98	30	54	6	28	4.78		1.82	0	5	20	0	11	s.	L. J. Nunnemacher.
Lawrence	Plaquemines	6	20	76.6	+ 0.9	101	31	54	8	36	3.68	+ 0.46	1.69	0	5	25	3	3	s.	H. C. Warmoth.
Leesville	Vernon		4																	C. M. McFarland.
Liberty Hill	Bienville		23	74.3	+ 1.3	102	30	47	3†	41	2.14	− 2.09	1.64	0	3	25	1	5	s.	E. A. Crawford.
Logansport	De Soto	192	7								1.41		0.56	0	3	23	1	7	s.	Bettie M. Dennis.
Melville	St. Landry	45	23	73.0	− 1.5	99	30	46	6	39	2.20	− 2.12	1.03	0	6	25	2	4	ne.	Charles B. McNeill.
Minden	Webster	194	23	72.6	+ 0.3	99	30	45	3	39	2.99	− 1.34	2.05	0	4	21	5	5	s.	Ethel Fort.
Monroe	Ouachita	82	23	76.0	+ 2.7	98	15	50	3†	36	0.03	− 3.91	0.03	0	1	28	0	3	n.	L. L. Smith.
Morgan City	St. Marys	14	5								2.41		1.13	0	7	23	3	5	ne.	Virgil E. Kinsey.
Newellton	Tensas		4	74.9		101	29	44	6	39	2.30		2.30	0	1	27	4	0	s.	John D. Fultz.
New Iberia	Iberia	15	23	74.1	− 0.4	95	31	53	6	26	2.13	− 1.56	0.93	0	9	17	11	3	ne.	Mrs. John A. Gebert.
New Orleans (1)	Orleans	51	40	75.8	+ 1.3	96	31	57	3	20	2.20	− 1.87	2.47	0	6	15	13	3	e.	U. S. Weather Bureau.
New Orleans (2)	do.	18	23	76.6	+ 1.7	99	31	50	8	34	3.53	− 0.56	1.53	0	4	14	7	10	s.	Sugar Experiment Station.
Opelousas	St. Landry	83	19	75.5	+ 1.0	102	30	48	6	35	2.39	− 2.83	0.81	0	6	24	2	5	n.	Andrew Moresi.
Paradis	St. Charles		....																	Louisiana Meadows Co.
Pearl River	St. Tammany	29	5								7.38		3.30	0	8	28	1	2	e.	George F. Bancks.
Plain Dealing	Bossier	268	19	71.9	+ 0.2	98	30	44	7	37	1.58	− 3.67	0.70	0	3	21	6	4	se.	Leon Sanders.
Rayne	Acadia	44	19	75.0	0.0	99	30†	54	9	31	2.65	− 1.61	1.64	0	6	23	2	6	e.	A. P. McNeil.
Reserve	St. John Baptist		10	76.0[g]	+ 1.2	....	....	50	9	41[g]	6.25	+ 2.07	2.43	0	7	21	4	6		Leon Godchaux Co. (Ltd.).
Robeline	Natchitoches	147	15	71.6	− 0.5	99	30	41	6	39	2.47	− 2.34	2.07	0	3	24	2	5	e.	Ruby McCook.
Ruston	Lincoln	312	16	73.9	+ 1.5	99	30	45	3†	36	1.00	− 3.41	1.00	0	1	24	6	1	sw.	R. A. Clampet.
St. Francisville	West Feliciana	115	8	74.8		95	29†	50	2	32	T.		T.	0	0	30	1	0	s.	L. P. Kilbourne.
Schriever	Terrebonne	17	19	75.2	+ 0.3	97	29†	50	8	35	5.73	+ 1.76	1.71	0	9	25	0	6	e.	Harriet F. Rievier.
Sheridan	Washington		1	73.8		99	29	47	6	38	3.78		0.95	0	7	16	13	2	n.	D. A. Self.
Shreveport	Caddo	249	40	73.6	+ 0.4	97	30	47	3	29	0.89	− 3.27	0.49	0	3	24	4	3	se.	U. S. Weather Bureau.
Simmesport	Avoyelles	42	5								0.99		0.33	0	7	20	2	9	se.	C. T. Leigh.
South'n University farm	Jefferson		14								3.52	− 1.45	1.45	0	5	13	11	7	se.	F. L. St. Martin.
Sugartown	Calcasieu		18	74.8	+ 0.8	97	30	52	6†	30	1.70	− 2.77	0.82	0	4	4	26	1		G. W. Richardson.
Tallulah	Madison	91	4	72.6[d]		99	28†	40	5	36[d]	1.22		1.05	0	2	3	28	0		C. E. Speed.
Walker	Livingston		1	74.2		98	31	47	5	35	2.00		0.70	0	6	20	9	2	ne.	H. C. Fondren.

[a], [b], [c], etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 7, Lower Mississippi Valley.*

Stations.	River basins.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado.																																	
Blaine	Cimarron		.22					.20					.30	.14	.70						.08								.95		.27	2.86
Buena Vista	Arkansas														.20															T.	0.20
Calhan	Big Sandy							1.39			T.				.01	.19				.02	.09						.04		.24	.05	.02	.01	2.06
Canon City ‖	Arkansas								.07							.15					.10	.02					T.			T.	T.		0.34
Colorado Springs	Fountain				T.		.01	.02							.39					T.	.02					T.		.02			.11	0.65
Cripple Creek	Oil Creek					T.	T.								.06	.12					.10	.04						T.			.25	0.57
Cuchara Camps	Cucharas														.27					.04	.64	.35				.26			.09		.06		1.71
Eads	Big Sandy																																
Fairview	St. Charles																.54				.57							.02					1.13
Fremont Experiment Station. ‖	Fountain	T.	T.	T.	T.	T.	.17								.26				T.	.06	.12					T.			.07			.25	0.93
Garfield	Little Arkansas.						.06	.20			.02				.03	.27				.23												.04	0.85
Hamps	Big Sandy							.01			.02				.13														1.86	.15			2.17
Hermit Lake	Grape Creek							.15		.18					.20	.07				.03	.33	.22					.11		.04			.31	1.64
Hoehne (near)	Purgatoire							T.							.38														.21			.22	0.81
Holly	Arkansas				.02				.12							.08														.75			0.97
La Junta	do								.25																		.05		.58		.65		1.53
Lake Moraine	Fountain	T.	T.					.20	.07						.09	.14				.39	.37	.12					.05						1.43
Lamar	Arkansas			T.																									1.25	.07	.08	.21	1.61
Las Animas	do							.12												.11	.13								.73	.09		.32	1.50
La Veta Pass	Cucharas								.20	.20					.19					.30						.12	.08		T.	.08			1.17
Leadville	Arkansas	T.					.11	T.			.02				T.	.15				.38	T.						.02					.02	0.70
Limon (near)	Big Sandy						.01	.05			T.				T.														1.42		.01		1.49
Madrid	Purgatoire							.18							.06					.02		.04							.04			.19	1.13
Marshall Pass	Arkansas							T.								T.				T.				T.				T.				T.	T.
Monument	Fountain																																
North Lake	Purgatoire														.10					.04	.14	.10					.10						0.48
Pueblo	Arkansas					T.		T.							.01	.01				.18	.07					T.			.13	T.		T.	0.40
Rocky Ford (near)	do							.31							T.					T.	T.								.09			.25	0.65
St. Elmo	Chalk Creek						.05	.14	.06					.05		.34				.17						.11							0.92
Salida ‖	Arkansas								.02			T.				.05											.01			.03			0.11
Santa Clara	Huerfano	T.						.11					T.	T.	.16					.16	.13	.20				T.			.07	.02		.66	1.51
Sheridan Lake	Arkansas		.20																							.17			.90			.07	1.34
Stonewall	Purgatoire							.01						T.	.30					.08	.10					.03			.24	.32		.28	1.36
Trinidad	do						T.	.02							.05						.03	.01							.02	.01	T.	.04	0.18
Victor	Oil Creek						T.	.20	.08							.44				T.	T.	T.											0.72
Vilas	Cimarron							.20						.61	.59	1.25				.25	.28												3.18
Wayne	Arkansas	T.	T.												.20					.07	T.					.08			1.83			T.	2.18
Westcliffe	Grape Creek						T.								.05						.14									.17		.25	0.61
Winfield	Clear Creek	T.					.02	.12			.01			.01	.03	.13				.14	.07	T.					.03		T.	T.		.05	0.61
Woodman Sanatorium.	Fountain	T.	T.	T.			T.	.05	T.						T.	.15				T.	.03	.12					T.		.01	.02		T.	0.38
Wortman	Arkansas	T	T.				T.	.10	T.		T.	T.		T.	.15						.13	T.			T.	T.		.15	.10	T.		T.	0.63
New Mexico.																																	
Abbott	Canadian								.05				.05	1.05	.50														.28	.67			2.60
Albert	do							T.					.50	1.10	1.36	.03														.41			3.40
Aurora	do							.19	.06				.02	.19	.25	.32					.30	.07							.08	.82		.62	2.92
Bell Ranch	do						.05		.05				.81	T.	.52	.24					T.								1.29	1.84	.06		4.86
Black Lake	do							.36						.08	.71	.25					.25									.18		.66	2.49
Cabeza	do							T.	.06				.10	.25	.85	.25													T.	1.46			2.97
Campana	do							.16	T.		T.		.93	.10	.33														1.15	.73	T.		3.40
Chacon	do							.40					.07		.30	.72				.14										.24		.26	2.13
Cimarron (near)	do					T.	T.	.24						.62	.41						.05	.10				.06			.12	.54	.04	.43	2.61
Clayton	do				T.			.41					T.	.30	.14	.99	.32													1.24	.26	T.	3.66
Clovis	Red																																
Cuervo	Canadian								T.					T.	.01	.91					.08									.03	T.		1.03
Dawson	do							.27					T.	.10	1.00						.10					.12			.10	.42		.32	2.43
Elizabethtown	do							.09	T.					.07	.61						.21	.20					.05		.18	.23	.15		1.79
Folsom	Dry Cim'n				T.	.15		.04						T.	1.17						.22	T.				T.			.43	.30		.48	2.79
Fort Union	Canadian					.35		.12					.30	1.15	.35						.05					.06			.25	.35	.20	.12	3.30
Hayden	do							.34	T.				.50	.59	.21	.82					T.								T.	.27	.05	.20	2.98
Johnsons Park	do					.45		.07	T.				.09	.05	1.13	.21	T.			T.	T.					T.	.15		.28	.84		.08	3.35
Kappus	do													.40	.05	.05	.08												.60	1.80		.05	3.03
Lake Alice	do																																
Logan	do												.83			.14													*	3.46	.07		4.50
Los Alamos	do							.14					.30	.78	.32											.02			.11	.45	.17	.15	2.44
Lykins (near)	Red													1.30	.50	.18													.41	.14		.13	2.66
Maxwell (near)	Canadian							.09						1.32												.04			.02	.45		.14	2.06
Melrose	Red													.64	.70	.29													.34	.17		.11	2.25
Miami Ranch	Canadian							.20							1.78						.20									.43			2.61
Montoya	do							T.						.25	.10					.01										.10			0.46
Mount Dora (near)	do							.10					T.	.13	.36	.51				T.	.22								.33	.77			2.42
Nara Visa	do				T.								T.	.19	.34	.64	.08				.04									1.34	.20		2.83
Ocate	do							.26	T.					*	2.36	T.					T.	T.	.01							.57		.22	3.42
Optimo	do																																
Pasamonte	do							.16	.14					.45	.52	.08													.82	.16			2.33
Pleasant View	do																																
Portales	Red																																
Raton	Canadian					.25		.10	.10				.20	.10	.65	.10				.10	.01	T.				T.			.35	.53		.30	2.79
Rociada	do							.04		.12			.06	.50	.43	.01					.10									.22	.11	.17	1.76
Rosebud	do							.39					.34	.69	.07	.22													.56	.49			2.76
Roy	do							.02					.06	.23	.95														1.15	.70	.20	.06	3.36
San Jon	do				T.								T.	.15	.05	.35	T.										T.			1.71	T.		2.26
Solano	do							.11	T.				.09	.91	.75	.11													.18	1.55		T.	3.70
Springer	do							.01	.02					.27	1.00	.18					T.	.07							.06	.55		.08	2.24
Taylor	do							.05		.05			.05	1.40	.40					.10						.10			.15	.50			2.80
Trementina	do							T.	T.				1.08	.01	.22							T.								.40	.26		2.97
Tucumcari	do				T.								T.	.05	.15	.12													.48	.12			0.92
Valley	Dry Cim'n					T.								*	3.70					.05									*	1.70	.70		6.15
Vance	Canadian							.25	.03				.56	.53	.92	.59													*	1.52			4.40
Vermejo Park	do							.20						.03	.30					T.	T.								.30		T.	.20	1.03
Wagon Mound (near).	do							.14	T.				.14	1.77	1.21						.12					.13			.19	.53		.12	4.35
Texas.																																	
Amarillo	Canadian				T.								T.	.40	.15	.01					.04						.61		1.64	2.90	.13		5.88
Archer City	Red										T.	T.		T.								T.								.29			0.29
Arthur City ‖	do	.10					.10				.10	T.									.35												0.65

TABLE 2.—*Daily precipitation for May, 1911. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Continued.																															
Bonham	Canadian												.60		.40	.08											T.		1.85	.76	.15		3.84
Canadian	do																										1.00	.50					1.50
Childress	Red													.21		.08					.06							.45	.89	.17	.07		1.93
Chillicothe	do													.45	.21	.62	.13											.45	1.18	1.17	1.10		5.31
Clarendon	do											.41									1.42										36		2.19
Clarksville	do												.30	1.25		.41													1.40	2.04	.22		5.62
Claude	do													.68	.83	.63					.09							.82	.17	.10		3.37
Dalhart	Canadian								.05													.64								.85		1.97
Denison	Red	.14										.34									.83												1.49
Finley	do	.66																															0.13
Henrietta	do	.05										.04																	.04				
Hereford	do																																2.18
Lewis Ferry	do	1.08				T.	1.10																										5.85
Memphis	do													1.90	.25	.55												.55	1.20	1.00	.40		5.07
Miami	Canadian													.65	.63	.23					.05						T.	.72	1.83	.81	.15		4.50
Mobeetie	Red													.20		T.											1.20	1.00	1.60	.50			
Nazareth	do																																2.18
Ochiltree	Canadian												.65	.50		.15				.42							.65	.25	1.00	.28			3.90
Pampa	do																																
Paris	Red	.50				T.	T.					.64	.29								1.56	.32											3.31
Plemons	Canadian				.03								T.	.86	.08						.31						.02	.04	3.09	1.03	.05		5.51
Quanah	Red													.20														.40		.40	.50		1.50
Ringo Crossing	do	.45											.45										.67										1.57
Romero	Canadian	T.	T.		.02			T.					.82	.35	.30	.08		.03		.04										1.87		T.	3.51
Sherman	Red																																
Texline	Canadian					.50		1.00						.33	1.20	.50													3.00				6.53
Tulia	Red				T.								T.	.16	.17						T.	T.					T.	T.	.06	1.26	.10		1.75
Wichita Falls	do									.01			T.															T.	.18				0.19
Winfield	do											1.60									.32												1.92
Kansas.																																	
Alden	Arkansas			.66	.11	.33	.12							.25	.16							.11						.37	.75	.20		.10	3.16
Anthony	do			.14	.28	.82	T.				T.			.90		T.	T.	T.				T.	.06					2.01	2.51	.03			6.75
Ashland	Cimarron			.27	.27	.05	.06							1.03	.56	.17	T.					.01	.29				.27	1.00	.47	1.07	.03		5.55
Burlington	Neosho			.37							.13									.44		.34	.20					.32		.10	.12		2.02
Chanute	do			.20	.20		T.					.24								1.26	1.28	.37	T.					T.		.31		.18	4.04
Cimarron	Cimarron																																
Coldwater	do				1.30	.17	T.							.73	.42	.10	T.				.02	.07	.17				T.	1.23	.85	.66			5.72
Columbus	Neosho			.02	.05							.52						.02		.01		.08	.04							T.		.40	1.14
Coolidge	Arkansas								.20							.25														.70			1.15
Cottonwood Falls	Neosho			.46								.12									.01	.09	.32					.10	1.76		.01	.21	3.08
Council Grove	do	T.		.55	T.						.02										.04	.14	.15					.09	1.07		.02	.15	2.23
Cunningham	Arkansas			.25	.35	.65	.27							1.10	.39	T.					.20	T.	T.					.30	1.35			.33	5.19
Dodge City	do			.06	.07	.05	.02	.05				.84	.16	.13	.02						T.	.34	.05				.30	1.50	.03	.01	.02	.30	3.95
El Dorado	do			.36	.03						.30										.07		.10					.63	2.69		.03	.93	5.14
Ellinwood	do			.22	.15	.26	.25		T.					.63	.13	.01	.08					.25	.07					.31	.57	.01		.60	3.54
Emporia	Neosho			.63								.17									.02	.20	.15						1.80	1.21	.17	.18	4.53
Eureka	Verdigris																																
Fall River	do			.05	.10		T.					.25						.15		.20	.02	.03	.02						.20	.15		.15	1.32
Fargo	Cimarron				.12	T.		T.						.35	.54		T.				T.	T.							2.50		2.00		5.51
Fredonia	Verdigris			.08	.08		.01					.32					T.	.02		.08	T.	.07	.05						.25	1.25		.16	2.37
Garden City	Arkansas			T.	.25	T.						T.	T.	.40	.40							.25	.37				T.	1.10	T.	.14	T.	T.	2.91
Great Bend	do			.12	.22	.13	.25							.54	.17	.12						.40						.20	.92			.11	3.18
Greensburg	do			.10	.30	.20	.22							1.13	.77	.01						.13	.16				.09	.25	.77	.04	.01		4.18
Grenola	Verdigris			.11	.15		T.					.71		.07		T.		T.		.33	.01	.19						.13	1.55	.39		.63	4.27
Howard	do			.48			T.					.30		T.				T.		.24	.04	T.						T.	T.	T.	T.	.96	2.02
Hugoton	Cimarron			.04	.22	T.		.02						1.35	2.03	.86	.62				.07							.13		.33	.42		6.09
Hutchinson	Arkansas			.52	.12	.12	.01							.12	.02							T.	.10					.05	1.18			.19	2.43
Independence	Verdigris			.02	.06		.02					.49						.63			T.	.01	.05					T.		.78		.26	2.32
Iola	Neosho			.19	.09		T.				.09							T.		1.69	.05	.29	.05					.03	.01	.06	T.	.08	2.63
Irene	Arkansas				T.									.11	.30	.32				T.									T.	.72		.88	2.33
Jetmore	do			T.	.41	.03	.08							.43	.55							.55	.40				.14	.05	.20	.03	T.	.50	3.37
Kingman	do			.12	.09	.42	.05							.71		T.						T.	.07					.13	1.59	.02	.10	1.55	4.85
La Crosse	do			.21	.20	.05	.20						.68		.06							.78	.04					.51	.20			.87	3.80
Lakin	do		T.										T.	.03	.04					T.		T.						.25				0.32
Larned	do		T.	.24	.55	.22	.06	T.						.98	.43	.01						.53	.05					.94	.69	T.	T.	.50	5.20
Lebo	Neosho			.50								.24		T.				T.		T.	.01	.28	.27					.12	.39	.10	.06	.46	2.43
Le Roy	do				.54							.28			.07							.30	.20	.14					.94	.06		.48	3.01
Liberal	Cimarron			.10	.18	T.		T.						.33	1.18	.07					T.	T.					T.		.23	.52	.11		2.72
Macksville	Arkansas			.15	T.	.58	.12							1.45	.20	.30	T.					T.	.33	T.				.26	1.10	.26	T.		4.75
McPherson	do			.36	.31																		.20						.55	1.20		.06	2.68
Madison	Verdigris			.27	.04							.38		T.				T.		T.	T.	.10	.25					.29	1.04		T.	.21	2.58
Marion	Neosho			.74			.01				.15			.02	T.	T.				T.	.14	.09	.23					.06	1.43		T.	.75	3.62
Medicine Lodge	Arkansas			.14	.35	.74	.13						.28	.35		T.					.23	.07					.19	1.73	.76	.11			4.99
Medora	do		.17	.34	.08	.03	.02											T.		T.	T.	T.	.36					.60	.23	.01	.01	.28	2.13
Mount Hope	do		.31	.11												T.					.19		.10					1.02		.05	.11	1.89
Neosho Rapids	Neosho			T.	.33						.42									T.	.12	.32	.14					.23	.80	T.	.13	2.49
Ness City	Arkansas		T.	T.	.35								.15	.12	.12	.06						1.10					1.07		.04	1.90	.60	5.51
Newton	do			.82	.11						.05										.12	.13	.21					.15	1.93		.02	1.12	4.66
Norwich	do			.13	.09	.30	.04					T.		.39	T.	T.					.08		.07					.57	1.48		.07	1.36	4.58
Oswego	Neosho			T.	.07						.89							.02		.02	.03	.11	.10							.05		.35	1.64
Plains	Cimarron			T.	.15			.20						.20	.55	.25							.25				T.		.30	.45	.10		2.45
Pratt	Arkansas			.10	.30	.70	.58						1.34	.43	T.								T.						.98				4.43
Rome	do			.03	T.	.03	.10				.36										T.	.05	.01					1.00	2.80	.27	.03	1.38	6.06
Sedan	Verdigris				.07	.05						.25										.05	.12							.25	.05	.55	1.39
Toronto	do				.18							.35							T.		.60	.24						.20		.10		1.77
Ulysses	Cimarron				T.			T.					.28	.54	.32													T.		.29	.20	.20	1.83
Walnut	Neosho			.05			T.					.34									.05	.71	.20					.82		.44		.12	2.73
Wellington	Arkansas			.01	T.	.06	.02					.49		T.		T.					.04	.01						.78	4.28	.06	.03	1.20	6.98
Wichita	do			.22	.04	T.	T.				.12										.06	T.	.10					1.65	1.51		T.	.96	4.66
Winfield	do	T.		T.		T.					.20										T.	T.	T.					1.30	1.20	.75	T.	.75	4.20
Yates Center	Verdigris			.51			T.					.51						T.		.43	.01	.48	.03					T.	.08			.24	2.29
Oklahoma.																																	
Ada	Canadian					.25					.05									T.	.86	T.								1.55	.05	T.	2.76
Alva	Arkansas			.60	.60	.45																				T.	T.	3.75	1.45	.35			7.20
Apache	Red													.02															.81	.96	T.		1.79
Arapaho	Washita													.25							.07							1.33	.20	.22	.64		2.71
Ardmore	Red	.05										.48									.67	.25								.10	.38		1.93
Arnett	Canadian				.30	.15								.25	.80	T.					.10							.55	3.02	.12	.22		5.51

TABLE 2.—*Daily precipitation for May, 1911. District No. 7*—Continued.

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	3	31	
***Oklahoma*—Contd.**																																	
Bartlesville	Arkansas			T.	.33							.81					T.				T.	.10									.80	2.04
Beaver	Canadian				.65	T.							.12		.62	.16						.20					.15		.45	.65	.12		3.12
Blackburn	Arkansas			.10	.02							.48					.02	.40		.38	.02								.14		.48	2.04
Cache	Red																											.05	.55	.80			1.40
Calvin	Canadian					.10	.08					.22									1.24	.78								.04	.02		2.48
Chandler ‖	...do					.28	.31											T.	.20		T.		T.							.04	T.	0.83
Chattanooga	Red											.08																.22		.68			0.98
Chickasha	Washita																										T.	T.	.25	.65	.15		
Cloud Chief	...do													T.														.94	.06	.37	.75		2.12
Durant ‖	Red	.20					.05					.21	.05								1.28	.21								.03	T.		2.03
Eldorado	...do												T.	.25							T.	.07						.53	.23	.65			1.73
El Reno	Canadian					.33																							.59	.01	.55		1.48
Enid ‖	Cimarron			.10	.05	.35	.34					.02										.02	.30					.15	.18	.65			2.16
Erick	Red													1.08		T.					.05	T.					1.90		2.17	.76	.55		6.51
Fairland	Arkansas			T.								.24						T.		.05		.05								.39		.76	1.49
Fort Gibson	...do	.75			.05			T.				.02	.02						T.		.76	.31									.56	T.	2.47
Frederick	Red													.08								T.						.15	.68	.38			1.29
Goodwell	Canadian				.02			.73					T.	.23	1.10						.05	.01					.03		.24	.53	.18		3.12
Guthrie	Cimarron					.35																						.20	.30		.12		0.97
Guymon	Canadian																																
Harrington	Red												.35														.98		2.34	.98			4.65
Hartshorne	Canadian					.12						.17									2.53												2.82
Healdton	Red											.89					T.				T.								1.41				2.30
Helena	Cimarron			.14	.23	.70	.03							.10								.25	.13					.12	.98	.25			2.93
Hennessey	...do		.05		.03	.31														T.								.11	.37	.08			0.95
Hobart	Red											T.	T.	.04														1.13	.27	.43	.84			2.71
Holdenville ‖	Canadian					.09	.26					.10									.85	1.48								.28	.26		3.32
Hooker	...do				.17			.48					.08	.51	.90	.06					.05						.03	T.	.31	1.07	.15			3.81
Hurley	...do					.10						.15	.52		2.55															.55			3.87
Idabel	Red																				.70										T.		0.70
Jefferson	Arkansas			.46	.30	.74	.06				.16			T.									T.					.86	.71				3.29
Kenton	Cimarron		T.			.01		.11	.08					.22	.72	.07					.30								.36	1.56	T.	.52	3.95
Kingfisher	...do			.03	.01	.34						.02						.01		.03		.01	.07					.61	.44		.59		2.16
McAlester	Canadian					.18						.29									2.25									T.			2.72
McComb	...do																																
Mangum ‖	Red													.18								.13						.90		.16	1.43		2.80
Marlow ‖	Washita											1.13						.27										.02	.05	1.30	1.50		4.27
Meeker	Canadian					.47																								.50	.10		1.07
Muskogee	Arkansas																	T.			.91									.51		.16	1.58
Mutual	Canadian													.42													.95		2.15				3.52
Neola	Washita					T.						T.		.06														.08	4.80	.99	.40		6.33
Newkirk	Arkansas			T.		T.	.10				.37									T.	.13							.37	1.48			1.83	4.28
Norman	Canadian																																
Oakwood	...do					.06								.07							.01							.59	.21	.39			1.33
Okeene	Cimarron				.06	.32	.01				T.	T.		.07							T.	T.	T.					.16	.78		.08		.48
Oklahoma	Canadian				T.	.28					.04						.35				T.	T.					T.	.10	.85	.01	1.02		2.65
Okmulgee	...do	1.35				.37						T.									3.53							.17	T.	2.76			4.88
Pauls Valley	...do																				.10												3.40
Pawhuska	Arkansas			.03	.03		T.					.40		T.			T.	.43			T.	.05	.11						T.	.21	T.	.30	1.56
Perry	...do			.14	T.	.85	T.					.44						.24		.01	.03	.02	.21					.37	.55		T.	.60	3.46
Ravia	Washita											.96		.15							.30								.48	.78			2.67
Sac and Fox Agency	Canadian					.50	T.														1.07	T.							.25				1.82
Shawnee ‖	...do					.12	.09											.27			T.	.04	T.							.25	.05	.03	0.85
Snyder	Red													T.														.23	.10	1.80			2.13
Stillwater ‖	Cimarron			.04	T.	.38	.35					.19			T.	T.			.24		.14									.20		.22	1.76
Tulsa ‖	Arkansas	.03			.04	T.						.20							.30		.77	.10	.02							.01		.50	1.97
Vinita	...do						T.					.40		T.					T.	T.	.04												
Wagoner	...do											.10						T.			.83									.42		.11	1.46
Waukomis	Cimarron			.07	.20	.55					T.	.35						T.			.03	.05	.25				.15	.65		T.	T.	2.30
Waurika	Red											.57																.83	T.	.17			0.74
Weatherford ‖	Canadian					.02	T.							.08								T.							.11	.81	.61		2.46
Webbers Falls	Arkansas											T.									.68	.58								T.			1.26
Whiteagle	...do																																
Woodward	Canadian				.13		.04							.60	.77	T.					.10		.26					.34	1.79	.03	.07		4.13
Missouri.																																	
Belle	Meramec			T.																	.05	.14							.10	.60	.08		0.97
Birchtree	Black																					.20											0.20
Cape Girardeau ‖	Mississippi	.70			T.								T.																T.				0.70
Caruthersville	...do												T.																		.25	.01	0.26
Cassville	White										T.		.08							.12	.01									T.		.39	0.60
Dean	Neosho			.10								.32									.19	.03								.06	T.	.42	1.12
Doniphan	Black											.20									.03	.33										T.	0.56
Gano	Meramec																				.70	.05							.22			.02	0.99
Goodland	Black																												.24				0.24
Greenville	Mississippi				T.							.25							T.		T.	.35						T.				T.	0.60
Hollister	White																	T.						.30					.40				0.70
Ironton ‖	Mississippi	2.03			T.								T.							.04		T.		T.					T.		.10	2.17
Jackson	...do			T.								.07							.05												.20	0.32
Joplin	Neosho											.37																			.62	0.99
Koshkonong	Black			T.	T.						T.	T.						T.	.15		.28	.12		.02			.16	T.			T.	0.73
Lamar ‖	Neosho	.19			.08							.34									T.								T.		T.	.29	0.90
Marble Hill	Mississippi	.20										.18																				.40	0.78
Mountaingrove	White			.03								T.							T.			.12		T.					.45				0.60
Mount Vernon	Neosho				.04							.16									T.									1.44		.10	1.74
Neosho	...do				T.							T.									.27	T.						.04	T.	.38	1.80	2.49
New Madrid ‖	Mississippi	.08												.02									T.						T.				0.10
Oakfield	Meramec	T.		T.																	.09	.23						T.	T.	.46		.74	1.52
Olden	White																	.15	.03		.40	.14											0.72
Perryville	Mississippi	.24																			.50												0.74
Rolla	Meramec				.02																1.36	.08							.22		.19	.04	1.91
Springfield	White	T.		.02	.05							.13									.01	T.								.13		T.	0.34
Steelville	Meramec																		T.		.08	.05						T.	.09	T.		.26	0.48
Kentucky.																																	
Blandville	Mississippi	T.											T.	.38					T.	T.	.01		.10							T.		.13	0.62
Lynnville	...do																																
Tennessee.																																	
Arlington ‖	Mississippi	1.20																				.04											1.24
Bolivar ‖	...do	T.																			T.	.41	.76										1.17

TABLE 2.—*Daily precipitation for May, 1911. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Tennessee—Contd.																																	
Brownsville ‖	Mississippi	.84																		T.	T.	.25	T.										1.09
Covington ‖	do	.46													.20																.40		1.06
Dyersburg ‖	do	.20																															0.20
Jackson	do	.60																				.49	1.81										2.90
Kenton	do	.30											T.	.61					T.	T.	.20		.13							.06		T.	1.30
Memphis	do																				.20												0.20
Milan ‖	do	.59												T.						.02	T.	.85	1.22	.02							.03		2.73
Trenton	do	.49																	.18	T.	.80		.24							.25			1.96
Union City	do	.50																											.20				0.70
Arkansas.																																	
Alicia	White																													1.70		1.70
Amity	Ouachita											.10							T.		1.50	.02											1.62
Arkadelphia (near)	do											.28						T.			1.80												2.08
Arkansas City ‖	Mississippi																					1.00											1.00
Batesville ‖	White	.22											T.									.62											0.84
Bee Branch	Arkansas																		T.		.65										T.		0.65
Benton	Ouachita																				.50												0.50
Bentonville	Arkansas			T.	.05							.10								T.	.24											.48	0.87
Bergman	White																				.56											.14	0.70
Black Rock ‖	do	.30																			T.	.62								T.			0.92
Brinkley ‖	do	.14																				1.13											1.27
Calico Rock ‖	do																			.25	T.	.50	T.										0.75
Camden ‖	Ouachita	.15											.57								.05	.70											1.47
Center Point	Red					T.						.47									.60												1.07
Clarendon ‖	White	.16																		T.		.53											0.69
Conway	Arkansas											.08								T.	.94	.05											1.07
Corning	White	.15										T.								T.	.28	.64								T.		T.	1.07
Dardanelle ‖	Arkansas	.10																			.54	.90											1.54
Dodd City	White											T.									.40											T.	0.40
Eldorado ‖	Ouachita	T.											.02								.14	1.29											1.45
England ‖	Arkansas	.16				T.															.85	.50											1.51
Eureka Springs	White																				.33												0.33
Fayetteville	do																				.33											.49	1.15
Fordyce	Ouachita										.26										.41	.05										.19	0.65
Fort Smith	Arkansas				.02							.14					.38				.30	.80											1.74
Fulton ‖	Red												.44							.18	1.22											T.	1.56
Hardy	White	T.										.06							.03		T.	.86											1.30
Helena ‖	Mississippi	.10																		.20	T.	.28						T.	.06				0.43
Hot Springs	Ouachita											.20									.20	.12						T.					0.42
Huttig	do																				.80	.70											1.10
Jonesboro	White																				.45												0.80
Junction	Ouachita											T.									1.37												0.45
Lake Farm	Arkansas																				.50	.72											1.37
Lewisville	Red											.31									1.00												1.12
Little Rock	Arkansas				T.							T.								T.	.78	.04											1.31
Lutherville	do				T.																.73	.05											0.82
Malvern ‖	Ouachita	.15																	T.		.40	.37							.33		.39		1.50
Mammoth Spring	White											.04		.10								.43											0.92
Marked Tree ‖	St. Francis																					.22											0.57
Mena	Ouachita											.45									1.49										.08		0.22
Newport ‖	White	.16																				1.85											2.02
Ozark	Arkansas											.36								.94										.12	T.		2.01
Pine Bluff ‖	do	.12											T.								.01	.52											1.42
Pocahontas	White	.55										.10										.40											0.65
Pond	Arkansas				T.							.08						T.			.21								T.		.62		1.05
Portland ‖	Ouachita													.03								.75									.60		0.91
Prescott ‖	do	.11											.58						T.		.22	.65											1.38
Rogers	Arkansas				.10							.05						T.			.14										.41		1.56
Springbank ‖	Red	.36				T.							.66								.10	.32											0.70
Stuttgart	Arkansas																		T.		1.06												1.44
Subiaco	do				T.									T.					T.		.93							T.			.17		1.06
Swain	White				.01							.01	.01								1.01	.02									.02		1.10
Texarkana ‖	Red	.18											.70								.09	.81											1.08
Warren ‖	Ouachita																					.89											1.78
Whitecliffs ‖	Red	.43											.50								.08	.58											0.89
Wiggs	Ouachita											.27						T.	T.		1.11	.10					T.						1.59
Wynne ‖	St. Francis	.08																				.30								27			1.48
Mississippi.																																	0.65
Anguilla	Yazoo												T.									.71								T.			0.71
Austin	do	.09																	.08		.22	T.											0.39
Batesville ‖	do																					.92											0.92
Big Creek	do																		T.		4.40	.44	.59						T.		T.		5.43
Byhalia	do													T.							.66	.21								35			1.22
Canton	Big Black																					.02								.05			0.07
Charleston	Yazoo																																
Clarksdale ‖	do													T.								.11								.09	.04		0.24
Coffeeville	do																				.08	.53	.13						T.	.01			0.75
Corinth ‖	Mississippi																					.04	1.32										1.36
Crenshaw	Yazoo	.03																			1.87	.14								.57			2.61
Denmark	do																				.94	.50	.47										1.91
Duck Hill	do												T.								.36	.38	.10								T.	T.	0.84
Edwards	Big Black																T.	.08		.04	1.05	.60							.05			1.82
Enid	Yazoo																				T.	1.35											1.35
Fayette	Mississippi																	T.	T.		.88							T.		.35			1.23
Greenville ‖	Yazoo													.01							.05	.70									.45		1.21
Greenwood ‖	do	T.												.50								.34	.04										0.88
Grenada	do												T.								T.	.60											0.60
Hernando ‖	do	T.																				1.70	T.										1.70
Hickory Flat	do														.12						2.83	.58	.63										4.16
Holly Springs ‖	do														.32						1.52	1.69	.09										3.62
Kosciusko ‖	Big Black	1.13																				.42	.17							.02		.64	2.38
Lake Cormorant	Yazoo	.52																	T.		2.24									.09			2.85
Lula	do																	T.	T.		.20	.09											0.29
Malone	do	.29												T.					T.	T.	6.25	.05	.10										6.69
Marks	do																				.41	.31									.33		1.05
Natchez ‖	Mississippi	.86		T.									T.	.41								.34											1.61
New Albany	Yazoo														.32						.53	.56	.90										2.31
Pontotoc	do																		.20		1.00	.80	.44										2.44

TABLE 2.—*Daily precipitation for May, 1911. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Mississippi—Con.																																	
Port Gibson ‖	Mississippi	2.00		.03									T.	.27					.16		T.	.49									T.		2.95
Rosedale ‖	Yazoo																					.20											0.20
Senatobia	do																			1.03	.57									T.	T.		1.60
Shoccoe	Big Black																T.		T.		T.	T.								.09	.13		0.22
Suffolk	Mississippi	.04	.15										T.					T.	T.	.23	.82												1.24
Swan Lake ‖	Yazoo													.35								1.80											2.15
Tchula	do												T.						.20		.10	T.							.70	T.		T.	1.00
University	do																			T.	3.20	.49	.19										3.88
Utica	Mississippi	.02	T.										T.				T.		T.	.08		.60							T.	T.			0.70
Vicksburg	do												.10				.05	T.	.05		.29	.05						T.	.11				0.65
Water Valley	Yazoo																			T.	T.	1.45		.20									1.65
Woodville	Mississippi	.60	T.	.14									.12					.05			.15	.26					.36			.06			1.74
Yazoo City ‖	Yazoo	.92												.48					.13			.13								T.	.58		2.24
Louisiana.																																	
Abbeville	Coast	.51	.12	.14									T.					.70					T.	.88						.05			2.40
Alexandria ‖	Red	.10											.93								.03	2.27											3.33
Amite ‖	Coast	2.00	.30	.42															.50		1.10	.20	T.	T.						.25			4.77
Baton Rouge ‖	do	1.52	.15	.44	T.								T.			T.					.02	.88								.05			3.06
Burnside	do	1.96	T.	.64																.20		1.20							T.	T.			4.00
Burrwood	do	.23	.08	.29																.06	.82	2.62											4.10
Cades	do	2.00	.29	.08									.71														44					.29	3.81
Calhoun	Ouachita											T.					T.				.90	.39											1.29
Cameron	Coast		.49	1.74									.56									T.						T.					2.79
Carrollton	do	1.20	.10	.90																										.80			3.00
Cheneyville ‖	Red	.18		.12									.65	.15								1.20											2.30
Cinclare	Coast		3.25									.05			12					.06	.53												4.01
Clinton ‖	do	.24	.15	.20									T.						.04		T.	.82									1.48	1.33	4.26
Collinston	Ouachita																					.65											0.65
Covington ‖	Coast		1.25	.29															.54		.01	.97	.07			T.				.52			3.65
Dodson	Red										T.											1.83								.30			2.13
Donaldsonville ‖	Coast	6.00	.25	.83	.30									T.								T.		T.						.05			7.43
Farmerville ‖	Ouachita										T.										1.31												1.31
Ferriday	do																			.09	.60	.58								.48			1.75
Franklin ‖	Coast	1.10	.15	.47	.06									T.					.10	.40		.54			.05			.50					3.37
Grand Cane ‖	Red	.19											.50									.47											1.16
Grand Coteau	Coast	.72	.35										.05					T.	.02	T.	.03	T.			.03				T.	T.	.15		1.35
Hammond	do	1.95		.26																.40		.28								.15			3.04
Houma	do	1.70		.40																	.20	.10		.40									2.80
Jena	Red											.77									1.90												2.67
Jennings ‖	Coast	1.20		.42										3.44					.60			.57					.05				.50		6.78
Lafayette ‖	do	1.10		.30										.07					.05		.15	.13						.34					2.14
Lake Charles ‖	do			.30									.20	.60					.20								.05						1.35
Lakeside	do	.95		.58									1.82									.48										.95	4.78
Lawrence ‖	do		.83	.87	.19																	1.69		.10									3.68
Leesville	Sabine																																
Liberty Hill	Red											.40										1.64					.10						2.14
Logansport ‖	Sabine		.30										.55									.56											1.41
Melville ‖	Red	1.03	T.	.31										.12					.03		.25	.46										*	2.20
Minden ‖	do	.12		T.		T.							.70	.12								2.05											2.99
Monroe ‖	Ouachita												.03																				0.03
Morgan City ‖	Coast	.09	1.13	.24	.02									.51				T.	T.	T.	.02	.40						T.		T.			2.41
Newellton	Mississippi																													2.30			2.30
New Iberia	Coast	.10	.05	.47	.05								T.						.05			.93					.05			.10	.33		2.13
New Orleans (1)	do	1.44	.11	.21																		.23	.18							.03			2.20
New Orleans (2)	do	1.53		.33																		1.15	.52										3.53
New Orleans (3)	do	1.42	.11	.22																		.30	.21										2.26
New Orleans (4)	do	1.62	.10	.20																		1.10	.47										3.49
New Orleans (5)	do	1.62	.12	.20																	.02	1.08	.35							.01			3.40
New Orleans (6)	do	1.60	.11	.22																		.28	.23										2.44
New Orleans (7)	do	1.48	.13	.22																.10	.03	.28	.21										2.45
New Orleans (8)	do	1.59	.10	.20																	.03	.29	.40										2.61
Opelousas ‖	do	.62		.33									.14	.13					.81			.36									T.		2.39
Paradis	do																																
Pearl River	Pearl	3.30	.64	.26	.14																1.04	.68		.50	T.	T.				.82			7.38
Plain Dealing	Red											.70								.69	.19												1.58
Rayne ‖	Coast	1.64	.10	.45										.10						T.	T.	T.						.21	.15		T.		2.65
Reserve ‖	do	.14	2.43		.87																1.82	.31	.16	.52									6.25
Robeline ‖	Red	.15											.25									2.07											2.47
Ruston	Ouachita																					1.00											1.00
St. Francisville ‖	Mississippi	T.																															T.
Schriever ‖	Coast	1.09	1.71	.32	.08														.09		T.	.06	.70	1.46	T.					.22			5.73
Sheridan	Pearl	.80		.30												T.	T.	T.	.88	.05	.75	.05	T.							.95			3.78
Shreveport	Red											.49						T.			.39	.01											0.89
Simmesport ‖	do	.28		.18									.02	.11					.04		.03	.33											0.99
Sou. Univ. Farm	Coast	1.45	.02	.40																	T.	1.45	.20	T.									3.52
Sugartown	do	.28										.82										.40								.20			1.70
Tallulah	Mississippi												.07									1.05											1.22
Walker	Coast	.10	.20																	.50	.70								.10	.40	T.		2.00

* Precipitation included in that of the next measurement.
† Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 7, Lower Mississippi Valley.*

Date.	Colorado.						New Mexico.				Texas.				Kansas.										Oklahoma.			
	Lamar.		Leadville.		Pueblo.		Albert.		Cimarron.		Amarillo.		Paris.§§		Dodge City.		Ellinwood.		Iola.		Liberal.		Wichita.		Ardmore.§§		Bartlesville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	62	32	42	23	55	38	63	32	69	24	63	36	69	44	56	30	55	32	57	36	61	33	55	36	69	42	62	40
2....	79	31	48	21	67	31	68	41	70	31	67	42	68	44	62	34	56	29	56	33	70	31	59	35	72	43	63	37
3....	73	38	52	25	65	40	81	39	73	35	79	52	75	44	54	43	50	40	50	46	70	41	50	43	77	45	66	43
4....	68	40	61	25	66	42	69	47	74	36	69	50	80	46	48	42	51	43	60	44	53	41	55	45	82	51	64	49
5....	85	45	67	28	80	46	79	51	78	46	76	52	75	54	57	47	54	47	69	40	71	45	63	47	71	55	72	45
6....	96	53	58	34	85	49	83	55	79	41	79	51	78	54	82	50	70	50	74	48	80	56	68	52	81	53	77	51
7....	94	50	59	26	74	57	78	57	71	51	79	54	84	53	86	57	83	54	81	54	89	53	81	59	85	56	84	54
8....	99	53	60	30	86	50	83	52	80	41	81	54	86	54	85	57	85	57	86	61	91	57	85	59	87	56	89	55
9....	96	56	61	32	87	57	79	59	79	50	92	57	85	55	93	62	92	64	87	61	96	55	88	62	89	58	90	61
10....	90	55	41	20	73	48	84	55	70	52	85	55	87	60	90	51	93	65	89	62	90	62	90	59	89	56	91	66
11....	80	34	53	17	73	40	85	41	71	29	74	45	76	62	73	39	79	39	76	50	74	36	77	47	78	58	76	51
12....	88	56	60	25	80	43	78	48	75	44	82	52	77	58	81	49	82	49	83	48	85	49	80	52	86	59	88	56
13....	89	56	54	33	83	48	74	45	75	40	83	57	87	60	81	57	82	59	87	64	84	56	85	64	88	65	91	60
14....	85	60	59	29	76	48	70	55	63	46	71	59	89	62	73	61	77	62	87	68	76	56	85	68	90	66	91	62
15....	87	57	55	26	83	47	75	54	72	46	68	58	94	63	73	60	75	64	88	67	76	59	84	69	95	67	91	65
16....	92	50	57	21	82	51	81	55	77	40	80	55	92	65	81	58	83	59	88	69	83	58	87	71	90	68	93	65
17....	98	58	61	27	88	46	86	56	80	39	82	57	90	67	83	58	85	59	90	67	85	55	88	69	92	66	93	65
18....	99	60	59	34	88	48	86	58	79	39	89	60	90	65	89	64	89	66	89	69	92	53	89	69	93	68	94	65
19....	90	53	33	20	54	41	77	49	73	43	76	49	89	67	74	57	81	60	91	64	87	47	85	67	96	70	94	64
20....	63	43	35	19	56	39	71	52	55	35	65	45	82	62	67	50	70	53	66	56	76	47	67	55	67	67	64	54
21....	64	42	40	20	65	42	66	45	59	35	66	43	78	52	52	42	64	34	69	52	59	40	61	46	76	49	73	56
22....	81	45	56	24	73	39	80	45	69	37	79	49	88	52	66	47	69	41	67	49	76	43	67	46	90	51	76	52
23....	94	53	64	31	88	45	87	51	81	40	90	51	93	56	89	48	87	47	82	45	94	47	89	50	96	56	92	47
24....	99	57	61	36	85	52	89	62	84	43	87	59	93	59	89	61	91	63	92	63	92	55	93	67	95	64	96	61
25....	94	62	62	33	86	54	88	61	80	46	87	60	94	62	88	59	91	62	90	65	90	57	92	68	96	65	94	61
26....	95	65	48	35	78	55	85	64	74	48	83	61	90	62	84	61	89	65	90	66	86	64	90	71	93	67	95	65
27....	82	57	56	22	71	43	83	53	75	40	83	58	92	65	79	56	84	61	86	64	86	58	80	59	94	71	95	70
28....	75	53	60	26	64	49	78	53	68	40	70	53	93	65	69	58	68	56	85	60	78	55	69	59	89	67	94	65
29....	70	57	61	31	75	52	70	54	60	50	70	51	94	68	73	60	69	55	81	63	75	55	77	59	89	66	95	66
30....	89	54	64	31	86	48	84	58	78	50	84	56	97	69	86	62	89	62	87	62	88	58	86	67	97	67	95	67
31....	82	59	67	36	79	55	84	60	78	47	85	63	99	68	83	62	86	60	88	67	91	63	84	62	100	69	92	64
Mns..	85.1	51.1	55.3	27.1	75.8	46.5	78.8	51.8	73.2	41.4	78.2	53.0	85.9	58.6	75.7	53.0	76.7	53.5	79.7	56.9	80.8	51.1	77.7	57.5	86.8	60.0	84.8	57.5

Date.	Oklahoma.														Missouri.										Lynnville, Ky.		Jackson, Tenn.	
	Enid.§§		McAlester.		Mangum.§§		Muskogee.		Oklahoma.		Weatherford.§§		Woodward.		Caruthersville.		Ironton.§§		Lamar.§§		Olden.		Springfield.					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	68	38	72	41	68	38	65	42	61	37	68	38	61	36	72	50	51	43	55	38	69	38	45	36	.....	.....	72	55
2....	67	35	69	43	73	39	65	40	68	40	71	37	67	35	63	46	61	33	56	33	60	34	53	33	.....	.....	60	46
3....	74	39	76	46	81	46	71	46	73	48	79	39	76	50	67	40	62	37	58	38	64	36	57	42	.....	.....	69	40
4....	67	47	77	50	78	49	68	51	67	50	67	47	56	47	66	48	66	45	62	45	65	46	59	45	.....	.....	67	45
5....	55	48	70	53	81	53	73	53	57	52	71	49	67	50	71	45	71	33	70	43	70	41	66	45	.....	.....	69	40
6....	78	50	78	50	86	53	76	48	75	52	86	53	81	53	75	42	73	32	75	45	72	40	69	49	.....	.....	72	41
7....	85	50	82	51	88	54	81	55	82	54	87	53	85	58	80	43	79	36	80	52	76	44	74	53	.....	.....	78	38
8....	87	57	85	55	89	55	85	55	85	58	88	56	87	55	82	44	84	39	84	57	81	54	80	58	.....	.....	82	43
9....	90	58	86	60	94	56	85	59	89	63	91	59	92	62	89	51	88	60	85	61	82	56	82	62	.....	.....	85	48
10....	91	62	87	65	98	61	87	59	89	59	91	63	97	68	86	55	85	54	87	66	82	56	82	61	.....	.....	85	52
11....	77	49	85	60	84	55	88	59	76	53	81	52	79	40	87	63	76	61	76	56	77	62	69	57	.....	.....	90	54
12....	87	50	88	66	92	55	86	56	85	60	88	49	85	45	92	61	87	53	85	49	84	59	80	55	.....	.....	88	53
13....	93	65	88	66	89	64	89	65	88	66	92	57	84	60	89	61	86	53	88	58	85	60	83	64	.....	.....	91	55
14....	90	67	88	67	87	66	91	68	88	68	90	65	81	62	88	61	87	53	87	65	85	60	84	66	.....	.....	91	54
15....	90	65	93	66	86	67	91	73	89	68	87	68	76	65	92	57	88	49	89	65	85	60	85	66	.....	.....	90	59
16....	89	68	88	68	83	62	90	68	89	68	85	62	84	56	92	60	89	53	89	65	86	60	84	64	.....	.....	91	63
17....	93	65	90	67	93	62	88	66	88	66	92	64	86	58	90	63	90	59	90	67	86	63	85	67	.....	.....	93	69
18....	93	69	92	66	93	65	91	65	89	69	92	69	86	66	95	64	91	61	88	67	87	66	85	67	.....	.....	89	61
19....	90	70	91	71	91	68	91	71	95	71	91	70	81	63	92	68	87	67	89	70	84	65	85	68	.....	.....	90	65
20....	70	61	90	60	71	60	82	60	73	52	90	59	70	50	87	71	84	67	76	62	85	67	78	60	.....	.....	89	64
21....	68	51	75	51	75	45	73	55	70	50	72	50	63	45	85	65	78	64	74	55	70	59	70	55	.....	.....	82	69
22....	76	49	86	53	90	50	83	54	86	51	87	45	73	47	88	63	81	50	74	53	88	54	72	52	.....	.....	85	65
23....	97	50	91	59	96	50	88	55	95	56	98	49	93	47	92	54	84	53	87	45	83	54	83	54	.....	.....	87	55
24....	97	55	91	66	96	52	91	63	94	67	97	60	91	67	96	58	93	48	93	57	90	62	89	64	.....	.....	93	59
25....	97	65	93	63	96	59	91	62	93	66	96	64	91	65	98	60	94	53	93	62	89	64	88	65	.....	.....	95	60
26....	95	67	92	68	93	67	91	68	91	69	95	65	90	68	99	61	94	53	93	65	91	59	88	67	.....	.....	101	62
27....	90	64	91	70	91	58	91	69	91	66	86	61	85	61	100	66	94	58	93	68	91	67	88	69	.....	.....	102	63
28....	87	63	91	65	79	66	91	62	87	66	76	62	70	59	101	65	95	59	93	62	91	65	89	66	.....	.....	100	65
29....	89	62	92	69	85	69	90	66	80	63	84	63	79	62	100	72	96	60	86	66	92	62	87	67	.....	.....	101	65
30....	94	64	89	66	91	63	90	65	89	64	89	64	88	66	99	65	95	66	92	63	94	64	88	67	.....	.....	95	64
31....	96	68	95	67	96	55	92	67	91	68	95	65	88	68	93	68	92	64	89	66	91	67	87	69	.....	.....	89	66
Mns..	84.5	57.1	85.8	60.3	86.9	57.1	84.3	59.5	83.0	59.4	85.9	56.7	80.4	55.9	87.3	57.7	83.3	52.1	81.8	56.9	81.8	56.3	77.9	58.5	.....	.....	86.2	56.1

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 7*—Continued.

Date.	Tennessee.				Arkansas.																		Mississippi.					
	Kenton.		Memphis.		Bentonville.		Corning.		Dardanelle.§§		Eldorado.§§		Fort Smith.		Little Rock.		Pine Bluff.§§		Texarkana.§§		Wynne.§§		Clarksdale.§§		Corinth.§§		Greenville. §§	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	68	50	66	49	56	39	74	47	65	44	69	55	62	42	62	46	67	50	66	49	65	54	66	61	72	65	72	63
2....	60	44	60	49	60	35	61	49	67	40	60	47	69	44	61	44	61	45	60	48	63	41	62	44	62	45	65	47
3....	68	41	66	46	66	41	66	40	68	42	74	44	68	47	66	46	70	47	70	45	67	40	70	46	70	42	75	45
4....	69	45	66	50	60	48	65	49	66	46	75	48	62	53	66	52	73	50	74	50	68	47	72	49	70	48	76	49
5....	72	42	69	49	68	41	69	38	72	43	73	53	70	52	69	50	72	49	71	54	71	40	73	48	70	46	76	52
6....	75	41	73	50	74	40	74	39	74	41	77	43	74	48	72	50	76	44	75	48	75	42	76	45	76	43	80	46
7....	79	44	75	55	78	51	78	42	81	42	81	46	81	52	79	51	80	47	80	52	81	44	82	47	80	44	82	48
8....	82	45	80	55	86	61	82	45	85	48	84	50	84	55	82	58	84	59	82	56	84	47	84	47	82	44	85	49
9....	86	57	81	63	82	57	85	56	87	49	83	51	85	58	82	58	84	56	82	60	85	54	86	53	86	50	86	52
10....	84	59	84	64	82	62	83	60	86	59	84	56	86	61	82	59	84	58	83	63	85	60	86	60	84	57	85	59
11....	84	62	79	65	70	57	80	67	79	65	82	60	79	65	75	65	80	62	69	63	84	61	85	63	84	58	87	61
12....	88	65	84	68	82	56	86	59	88	60	87	59	85	64	85	61	86	62	83	60	88	61	87	66	86	61	88	65
13....	88	62	86	68	87	62	89	60	88	60	88	63	90	68	87	66	90	66	85	62	91	62	89	62	92	60	90	63
14....	87	61	88	68	85	74	87	63	92	62	93	61	90	67	89	68	93	63	88	65	90	64	92	62	86	60	94	62
15....	88	59	88	65	88	62	88	55	91	62	90	65	90	67	87	68	90	62	90	67	89	57	89	60	87	60	92	62
16....	90	61	87	70	86	61	88	59	91	59	90	62	90	66	87	66	89	61	89	65	90	60	88	65	90	62	90	63
17....	91	64	90	71	87	65	90	62	93	64	91	65	89	68	90	71	91	65	89	69	91	64	91	65	92	62	94	67
18....	93	64	88	73	86	64	91	65	93	63	90	66	91	68	88	70	91	66	88	69	92	63	92	65	92	64	93	68
19....	89	69	87	74	85	67	88	69	90	70	87	66	87	65	83	69	86	69	84	69	90	70	89	68	88	68	90	69
20....	81	69	82	67	72	57	84	69	83	64	86	63	70	57	82	62	82	65	84	64	91	71	89	69	78	70	89	71
21....	84	66	75	64	72	52	74	63	77	60	78	61	74	57	77	60	78	61	77	57	77	64	78	62	82	60	80	61
22....	85	65	83	67	76	49	81	58	85	53	83	51	83	56	82	58	84	53	84	56	85	54	87	61	84	66	87	59
23....	89	60	87	67	85	50	87	62	90	57	90	55	91	60	88	63	90	55	89	59	90	50	92	54	90	56	91	56
24....	93	60	90	68	88	60	91	59	92	58	90	59	92	63	91	67	92	59	90	62	92	53	94	58	91	59	94	59
25....	95	63	92	71	88	58	92	60	93	59	93	60	92	65	92	67	94	62	93	66	95	60	95	61	96	62	95	62
26....	97	64	94	73	89	63	94	62	93	62	93	66	90	67	91	68	94	65	91	71	96	66	96	63	94	64	96	65
27....	96	66	95	73	89	68	95	66	93	62	92	67	92	67	93	71	94	68	91	71	95	67	97	67	97	64	98	69
28....	100	65	97	71	90	63	96	66	95	64	94	65	93	68	93	72	95	68	92	69	98	67	98	67	99	66	98	69
29....	99	67	93	72	89	62	95	65	94	63	97	66	92	68	94	69	97	68	93	67	95	67	98	67	100	65	98	68
30....	97	64	92	73	92	63	96	65	94	66	98	68	91	69	94	73	97	70	94	69	99	67	98	65	98	64	97	67
31....	94	69	90	74	88	66	92	69	89	64	96	68	92	68	91	69	95	68	92	70	94	68	95	69	96	68	96	70
Mns..	85.5	58.5	82.8	64.2	80.2	56.3	83.9	57.7	85.0	56.5	85.4	58.4	83.3	60.5	82.6	61.8	85.1	59.2	83.2	61.1	85.7	57.6	86.3	59.3	85.6	58.2	87.7	60.2

Date.	Mississippi.						Louisiana.																			
	Kosciusko.§§		Natchez.§§		Vicksburg.		Alexandria.§§		Baton Rouge.§§		Covington.§§		Lafayette.§§		Lake Charles.§§		Monroe.§§		New Orleans.		Robeline.§§		Schriever.§§		Shreveport.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	76	64	79	65	75	58	76	65	79	67	82	69	78	62	84	60	76	60	79	65	75	62	84	69	70	54
2.....	68	44	58	52	65	50	65	53	70	62	76	58	66	59	64	57	71	52	72	61	62	52	76	61	60	51
3.....	73	47	67	55	73	51	75	50	68	59	67	57	65	55	70	51	79	50	63	57	64	44	67	57	74	47
4.....	74	48	77	53	74	54	80	52	77	61	83	55	77	58	78	55	86	52	78	60	69	45	81	59	76	54
5.....	72	50	75	55	72	55	75	49	78	61	81	55	76	56	79	55	80	56	75	61	75	50	80	55	73	57
6.....	77	45	78	44	76	53	80	50	80	58	82	50	78	52	79	52	86	50	74	60	80	41	81	52	77	52
7.....	81	45	82	48	80	60	80	52	83	59	84	52	80	53	82	50	88	53	77	61	82	46	81	54	80	53
8.....	83	47	84	49	80	57	85	50	80	61	84	49	82	53	85	52	88	54	81	63	85	47	85	56	82	57
9.....	84	49	83	53	80	62	85	52	83	64	85	53	82	54	82	52	85	68	82	64	85	49	85	52	82	61
10.....	85	53	76	53	81	58	84	52	84	63	84	54	82	56	82	55	88	58	82	64	86	54	87	54	84	62
11.....	84	56	85	60	83	61	85	57	85	67	85	56	84	59	85	60	88	68	82	65	89	59	88	60	79	63
12.....	85	61	84	65	82	68	85	63	83	70	88	60	83	67	84	64	85	65	86	66	87	61	90	65	84	61
13.....	93	58	80	61	87	67	90	61	89	68	94	60	87	60	84	60	92	64	89	69	89	61	92	58	86	66
14.....	91	62	92	63	91	68	90	61	92	72	97	62	92	61	91	62	95	64	89	72	92	60	95	63	91	66
15.....	88	61	89	64	88	67	90	67	87	71	91	64	89	67	90	65	98	66	83	70	90	58	88	62	90	68
16.....	88	65	89	65	88	69	90	65	86	.....	89	66	87	66	89	65	95	67	84	71	91	60	91	66	90	67
17.....	93	62	91	66	91	69	90	65	90	.....	89	64	90	65	90	64	92	69	84	69	91	61	90	64	89	68
18.....	89	64	89	66	84	68	90	65	91	.....	88	64	86	68	89	65	92	69	85	68	92	63	90	63	89	69
19.....	89	67	79	67	83	68	90	67	87	.....	88	66	85	68	86	65	91	67	85	69	88	64	87	65	85	68
20.....	82	71	84	67	84	62	90	69	89	68	91	67	86	69	89	66	87	69	87	70	92	67	88	66	89	63
21.....	84	60	81	61	78	62	78	60	80	62	84	63	83	63	85	55	90	63	84	66	80	61	92	66	79	60
22.....	86	65	71	63	85	67	90	55	85	65	87	65	87	64	92	52	90	58	86	69	89	50	90	64	74	59
23.....	90	58	90	58	87	63	92	56	90	68	91	66	90	63	95	55	90	59	87	70	91	51	93	67	90	61
24.....	92	57	96	65	92	70	93	60	91	67	93	68	93	68	95	63	91	62	89	72	92	55	92	66	90	64
25.....	94	61	94	63	94	71	94	65	91	69	93	67	92	68	93	67	94	65	91	74	93	59	93	67	92	67
26.....	96	64	93	65	94	71	94	67	90	68	94	65	92	67	91	65	92	68	90	73	94	64	94	67	90	71
27.....	97	65	94	67	92	72	93	67	92	69	94	65	88	69	91	66	93	71	89	72	92	63	95	65	90	71
28.....	100	69	95	63	95	72	94	64	94	69	96	66	91	66	93	64	94	68	92	73	94	60	95	64	93	67
28.....	98	68	98	68	94	71	95	65	94	67	99	69	95	69	97	62	96	70	94	74	94	62	97	65	95	69
30.....	99	66	99	62	97	74	97	69	95	69	95	67	96	69	100	68	97	72	92	72	99	63	95	68	97	72
31.....	96	67	99	67	94	74	97	70	94	70	98	69	96	70	100	65	97	72	96	76	98	65	97	69	94	72
Means..	86.7	58.7	84.9	60.4	84.5	64.3	86.8	60.1	85.7	65.7[d]	88.1	61.6	85.1	62.7	86.9	59.9	89.2	62.9	84.1	67.6	86.4	56.7	88.4	62.0	84.6	62.6

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT NO. 8, TEXAS AND THE RIO GRANDE VALLEY.

BERNARD BUNNEMEYER, District Editor.

GENERAL SUMMARY.

The weather during May was generally dry and clear and the mean temperature for the district as a whole was about normal. In portions of New Mexico and in the southeastern half of Texas the mean temperatures ranged from 1° to 3° below normal, while in the remaining portions of the district there was a corresponding excess. The rainfall was generally deficient, except in the Pecos drainage area and locally along the Gulf coast and in that portion of Texas lying between the Rio Pecos and Rio Grande, and it was much less than in the preceding month or in the corresponding month of 1910. So far as Texas is concerned there has been but one May, that of 1896, which averaged less precipitation. Washouts occurred in extreme west Texas on the Southern Pacific Railroad, which delayed traffic, but the principal precipitation feature was an exceptionally heavy rainfall at Matagorda, Tex., on the 1st, of which special mention is made elsewhere in this summary. The month was rather free from thunderstorms which are so frequently accompanied by hail or heavy local rains, but the wind movement was comparatively large.

As there was much moisture in the ground from the heavy rains of the preceding month, the dry weather was generally favorable for field work, although the need of more moisture was beginning to be felt before the close of the month, especially in the northern and north-central portions of Texas, which showed a deficit of precipitation in April. The moisture was well distributed as to time, but poorly as to place. In general, precipitation occurred in Colorado and New Mexico from the 6th to 8th, 13th to 15th, 19th and 20th, and 25th to 31st, and in Texas from the 1st to 3d, 10th to 21st, and 26th to 29th, but it was more or less scattered in all portions of the district. The number of days with 0.01 inch or more of precipitation averaged six in Colorado and four in New Mexico and Texas.

The greatest and least monthly amounts of precipitation in Colorado were 1.30 inches at Platoro and 0.11 inch at Saguache; in New Mexico, 4.45 inches at Liston and none at Gallinas, Glorieta Ranch, Noria, Rincon, and Strauss; and in Texas, 19.09 inches at Matagorda and none at Brady and Dublin. At seven other stations in New Mexico and three in Texas the amounts were too small to be measured. Heavy precipitation of 2.50 inches or more in 24 consecutive hours occurred at six stations in Texas, principally in the coast counties, the heaviest being 15.71 inches at Matagorda on the 1st.

Light snow occurred on the 19th or 20th at the higher northern stations in the upper reaches of the Rio Grande and Rio Pecos. The heaviest monthly snowfall in Colorado was 1.5 inches at Cumbres, and in New Mexico 2.5 inches at Harveys Upper Ranch. These amounts are much smaller than those reported for the corresponding month of the previous year.

TEMPERATURE.

The mean temperature for the district was practically normal. As a rule the days were warm and the nights cool and there was but little change in the temperature from day to day, except near the end of the month, when unusually warm weather occurred in many portions of the district. The highest temperatures, which broke all previous records for May in many localities, were generally recorded on the 30th or 31st and the lowest on the 1st, although in some sections the extremes occurred on other days. The average diurnal range of temperature varied from about 9° on the Gulf coast to about 40° in the extreme northern portions of the district.

Killing frosts occurred quite generally on the 1st and 11th at the higher altitudes in New Mexico and at a few very high northern stations as late as the 27th, and considerable damage resulted to gardens, fruit, and tender vegetation. There was no frost or very little in the southern portion of New Mexico and practically none in the Texas area.

The highest and lowest temperatures reported were: In Colorado, 80° at Garnett on the 30th and at Saguache on several dates and 13° at Hermit on the 1st and 11th; in New Mexico, 103° at Alamogordo on the 24th and 18° at Red River Canyon on the 11th; and in Texas, 105° at Graham and Grapevine on the 31st and 34° at Plainview on the 1st. The local monthly means ranged from 44.6° to 53.4° in Colorado; from 47.4° to 71.6° in New Mexico; and from 64.4° to 81.0° in Texas.

PRECIPITATION.

The precipitation over the Rio Grande watershed was generally deficient and considerably less than reported for April. The average for the entire drainage area was only 0.69 inch. In a few localities in Colorado and New Mexico and over a considerable stretch south of El Paso, Tex., the monthly amounts exceeded the normal. The greatest monthly precipitation was 5.80 inches at Marathon, Tex., but this was an exceptionally heavy amount for that locality. Of the remaining stations in the watershed about 80 per cent had less than 1 inch and among them were 11 stations, all in New Mexico, that received either no moisture or inappreciable amounts only.

Good showers occurred over nearly the entire Rio Pecos drainage area, although in a few localities the amount of precipitation was less than normal, while Gallinas, N. Mex., received no moisture. The greatest monthly amount was 4.45 inches at Liston, N. Mex., and 62 per cent of the reporting stations showed amounts ranging from 1 to 3 inches. The average for the watershed was 1.55 inches, which, while less than the amount reported for April, exceeds the normal by about 0.50 inch.

The precipitation over the Texas watersheds was decidedly less than normal and averaged only about 37

per cent of the April precipitation. The deficiency in general was greatest in the upper portions of the drainage areas and decreased southward until amounts were reached in some of the lower valleys and portions of the coastal plains that were greater than normal. There was practically no precipitation at Brady and Knickerbocker in the Colorado watershed nor at Claytonville, Eastland, and Dublin in that of the Brazos. The greatest monthly amount was 19.09 inches at Matagorda on the immediate Texas coast, and the next greatest was 8.10 inches at La Parra in Cameron County. From several other localities near the coast amounts of over 5 inches were reported, but notwithstanding, the average for the coastal plains was only about normal. The following are the average monthly amounts in inches for the various watersheds: Nueces, 1.36; San Antonio, 2.20; Guadalupe, 2.63; Lavaca, 2.93; Colorado, 1.57; Brazos, 1.59; Trinity, 1.42; Neches, 2.40; Sabine, 1.66; and coastal plains, 4.01.

RIVER CONDITIONS.

The Rio Grande was higher than usual during May. In its upper reaches the excess was slight, but from central New Mexico southward the stream was from 1 to 2 feet higher than the average for the last five years. The Rio Pecos also had a good flow, and there was an abundant supply of water in both streams for irrigation and storage.

The Texas streams were unusually low during the month. At the opening of the month there was still a good flow in the lower portions of the streams from the heavy rains in April, but they were falling, and before the month closed they showed a decided deficiency of water.

AN EXCESSIVE DOWNPOUR OF RAIN AT MATAGORDA, TEX.

From 9 p. m. April 30 to 7 a. m. May 1 the heaviest rainfall in Texas ever recorded for May occurred during a severe thunderstorm at Matagorda, which is located on Matagorda Bay near the mouth of the Colorado River. The time of precipitation covered 10 hours and the amount was 15.71 inches, or at the rate of 1.57 inches per hour. The total for the month was 19.09 inches. The flood waters stood about 1 foot deep on the top of the road grade, and about 30 head of cattle were drowned during the storm within 6 or 7 miles of Matagorda. Several houses were struck by lightning. Mr. W. E. McNabb, cooperative observer of this service at Matagorda, measured the precipitation very carefully and the measurement was subsequently verified. So far as the records show this downpour has been exceeded but once in Texas, which was at Fort Clark June 14–15, 1899, when 18 inches fell in 21 hours 30 minutes. The previous heaviest precipitation in May occurring in 24 consecutive hours was 8.50 inches at Liberty in 1907.

While exceptionally heavy precipitation is liable to occur during any month of the year, it is less so during the colder season than during the warm months. The following is the heaviest 24-hour precipitation on record for each month: For January, 7.13 inches at College Station in 1896; February, 5.55 inches at Danevang in 1907; March, 6.20 inches at Liberty in 1905; April, 9.23 inches at Galveston in 1904; May, 15.71 inches at Matagorda in 1911; June, 18 inches at Fort Clark in 1899; July, 14.28 inches at Galveston in 1900; August, 12.41 inches at Kaufman in 1908; September, 10 inches at Brazoria in 1900; October, 14.10 inches at Galveston in 1901; November, 6.87 inches at Beaumont in 1902; and December, 7.75 inches at Rockland in 1904.

MISCELLANEOUS.

Cundiyo, N. Mex.—The frost of the 11th and 21st killed nearly all the fruit that was in blossom, also some vegetables, young corn, and wheat. The streams are carrying plenty of water.

Harveys Upper Ranch, N. Mex.—Considerable snow remains in the mountain gulches and water is abundant.

Big Springs, Tex.—May was the driest month of that name in 12 years, but the farmers say that the crops are not suffering for rain.

Marfa, Tex.—The total precipitation for the month was 2.95 inches. This is the best rainfall that has occurred for years in this county.

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TABLE 1.—*Climatological data for May, 1911. District No. 8, Texas and Rio Grande Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers
				Mean.	Departure from the normal.	Highest.	Date	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Blanca	Costilla	7,865	2	50.2	.....	77	30	17	11	48	0.59	.....	0.16	1.0	9	9	22	0	sw.	Dr. L. C. Audrain.
Cumbres	Conejos	10,015	4	.....	.....	.....	.....	.....	.....	.....	1.21	.....	0.34	1.5	8	11	18	2	sw.	Mrs. I. M. Lively.
Garnett	Costilla	7,576	18	51.2	+ 2.5	80	30	20	11	51	1.00	+ 0.26	0.60	0	3	13	15	3	sw.	Chas. Speiser.
Hermit	Hinsdale	9,843	4	.....	.....	.....	.....	13	1†	.....	0.93	.....	0.31	T.	7	8	9	14	.....	Marion Mason.
La Veta Pass	Costilla	9,000	1	.....	.....	.....	.....	.....	.....	.....	1.17	.....	0.30	0.5	7	10	14	7	w.	Clara M. Wright.
Manassa	Conejos	7,700	5	51.0	.....	79	30	19	11	48	0.38	.....	0.20	1.0	3	11	13	7	sw.	J. B. Chapman.
Platoro	....do	9,675	4	.....	.....	.....	.....	.....	.....	.....	1.30	.....	0.33	T.	9	21	6	4	sw.	Walter R. Hook.
Saguache	Saguache	7,740	19	53.4	+ 2.0	80	4†	20	5	60	0.11	— 0.66	0.11	0	1	12	6	13	w.	Eugene Williams.
San Luis	Costilla	7,794	20	51.0	+ 1.3	78	31	22	11	46	0.73	— 0.46	0.24	1.0	8	13	16	2	sw.	P. B. Albright.
Wagon Wheel Gap Experiment Station.	Mineral	9,235	....	44.6	+ 2.2	66	30	22	11	36	0.65	— 0.38	0.31	T.	6	16	12	3	s.	U. S. Weather Bureau.
New Mexico.																				
Agricultural College	Dona Ana	3,863	49	68.8	— 1.5	96	30	35	1	50	0.10	— 0.14	0.07	0	2	10	21	0	sw.	N. M. Agricultural College.
Alamogordo (near)	Otero	4,338	10	69.0	+ 1.1	103	24	31	21	54	0.94	+ 0.73	0.49	0	4	14	13	4	sw.	Charles Sutton.
Alamogordo	....do	4,320	2	.....	.....	.....	.....	.....	.....	.....	0.41	.....	0.25	0	2	.....	.....	.....	.....	Agent, E. P. & S. W. R. R
Alamos Ranch	Sandoval	7,800	....	.....	.....	.....	.....	.....	.....	.....	0.62	.....	0.22	0	6	23	4	4	sw.	Harold H. Brook.
Albuquerque	Bernalillo	5,000	35	.....	.....	.....	.....	.....	.....	.....	0.28	— 0.11	0.24	0	2	26	4	1	s.	Pitt Ross, C. E.
Ancho	Lincoln	6,112	2	.....	.....	.....	.....	.....	.....	.....	0.02	.....	0.02	0	1	.....	.....	.....	.....	Agent, E. P. & S. W.. R. R.
Artesia	Eddy	3,350	4	69.8	.....	94	9	42	1†	41	0.62	.....	0.40	0	4	20	5	6	se.	Will Benson, C. E.
Aspen Grove Ranch	Rio Arriba	9,000	2	.....	.....	.....	.....	.....	.....	.....	0.33	.....	0.21	2.1	3	12	19	0	.....	Junius D. Maupin.
Batemans Ranch	....do	8,900	2	.....	.....	.....	.....	.....	.....	.....	0.79	.....	0.51	0.8	4	17	13	1	w.	John W. Bateman.
Bluewater	Valencia	6,732	9	54.3	.....	84	23	19	11†	58	0.32	.....	0.20	0	3	15	12	4	s.	Bluewater Development Co.
Boaz	Chaves	4,154	2	66.2	.....	91	18†	38	1	42	3.12	.....	1.84	0	6	16	9	6	se.	D. C. Savage.
Capitan	Lincoln	6,348	2	.....	.....	.....	.....	.....	.....	.....	1.00	.....	0.90	0	2	0	27	4	s.	Agent, E. P. & S. W. R. R.
Carlsbad	Eddy	3,120	16	71.6	— 0.1	96	9	45	1	43	1.35	+ 0.81	0.70	0	5	23	3	5	se.	U. S. Reclamation Service.
Carrizozo	Lincoln	5,429	3	66.1	.....	90	27†	41	21	44	T.	.....	T.	0	0	26	5	0	sw.	Agent, E. P. & S. W. R. R.
Carson Park	Taos	7,650	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lester S. Myers.
Chama	Rio Arriba	7,851	12	50.2	0.0	75	30	23	16†	43	0.49	— 0.80	0.18	0	4	21	10	0	sw.	Frank C. Johnson.
Cloudcroft	Otero	8,650	8	52.1	.....	73	28	24	1	38	T.	.....	T.	0	0	27	1	3	sw.	Agent, E. P. & S. W. R. R.
Corona	Lincoln	6,666	2	.....	.....	90	28†	.....	.....	.....	0.48	.....	0.26	0	3	22	7	2	w.	Do.
Coyote	....do	5,800	2	.....	.....	.....	.....	.....	.....	.....	0.26	.....	0.13	0	3	23	5	3	sw.	Do.
Cundiyo	Santa Fe	6,889	2	.....	.....	.....	.....	.....	.....	.....	0.42	.....	0.14	0	4	19	3	9	w.	Teofilo Vijil.
Demonstration Farm	San Miguel	6,800	2	.....	.....	.....	.....	.....	.....	.....	2.50	.....	0.50	0.2	9	.....	.....	.....	.....	Erb & Westerman.
Duran	Torrance	6,272	2	.....	.....	.....	.....	.....	.....	.....	0.33	.....	0.23	0	2	22	7	2	.....	Agent, E. P. & S. W. R. R.
Elk (near)	Chaves	7,400	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Boyd Williams.
Escondido	Otero	4,014	2	.....	.....	102	23	.....	.....	.....	0.74	.....	0.48	0	4	25	4	2	se.	Agent, E. P. & S. W. R. R.
Espanola	Rio Arriba	5,590	13	60.4	+ 2.1	84	24†	29	11	43	0.59	— 0.31	0.28	0	4	23	6	2	s.	Mrs. E. F. McBride.
Estancia	Torrance	6,140	6	55.2	.....	80	2†	30	10†	47	0.33	.....	0.16	0	4	18	12	1	e.	Agent, N. M. Central R. R.
Fort Stanton	Lincoln	6,231	33	58.1	— 1.0	86	25	27	21	56	0.75	+ 0.05	0.31	0	6	24	6	1	se.	United States Sanitarium.
Fort Sumner	Guadalupe	3,960	3	65.7	.....	87	30	40	1	33	1.73	.....	1.11	0	4	22	6	3	sw.	F. A. Manzanares.
Gallinas	Lincoln	6,635	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	16	7	8	w.	Agent, E. P. & S. W. R. R.
Gallinas Planting Sta	San Miguel	7,500	4	53.2	.....	80	24	23	1	43	2.54	.....	0.64	0	10	17	8	6	w.	U. S. Forest Service.
Glorieta Ranch	Socorro	5,700	1	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	26	5	0	s.	Chas. M. Crossman.
Harveys Upper Ranch	San Miguel	9,400	2	.....	.....	.....	.....	.....	.....	.....	2.70	.....	0.61	2.5	10	13	13	5	se.	Simon B. Warner.
Hillsboro	Sierra	5,224	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. F. I. Givens.
Hodges	Taos	8,484	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Austin Porter.
Hondo Reservoir	Chaves	3,904	2	67.2	.....	93	9	39	1	46	3.04	.....	1.39	0	6	21	7	3	se.	U. S. Reclamation Service.
Hope	Eddy	4,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. W. Board
Jamez Springs	Sandoval	6,100	1	58.6	.....	80	24	33	11	37	0.87	.....	0.50	0	7	11	13	7	sw.	Linus L. Shields.
Knowles (near)	Eddy	4,300	1	68.2	.....	94	31	38	1†	44	0.68	.....	0.48	0	2	20	7	4	se.	J. W. Mosley.
Laguna	Valencia	5,840	6	62.1[d]	.....	89	17	33	23	55	0.15	.....	0.15	0	1	.....	.....	.....	w.	Gus Weiss.
Lagunita	Guadalupe	4,500	6	63.2	.....	88	24	34	1†	46	0.25	.....	0.13	0	2	21	5	5	s.	P. A. Turnbull.
Lake Valley	Sierra	5,412	6	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0	0	17	14	0	sw.	Wm. P. Keil.
Las Vegas	San Miguel	6,384	24	57.3	0.0	81	24†	30	11	43	2.41	+ 0.51	0.55	1.0	11	19	10	2	sw.	N. M. Normal University.
Liston	Chaves	5,000	1	.....	.....	.....	.....	.....	.....	.....	4.45	.....	2.12	0	7	15	15	1	s.	H. G. Liston.
Los Lunas (near)	Valencia	4,900	21	63.8	+ 0.1	91	24	32	11†	52	T.	— 0.79	T.	0	0	22	9	0	.....	Richard Pohl.
Magdalena	Socorro	6,557	6	58.9	.....	87	25	28	1†	50	T.	.....	T.	0	0	23	8	0	w.	Wm. Pender.
Mescalero	Otero	6,475	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Rev. R. H. Harper.
Mineral Hill	San Miguel	7,050	6	.....	.....	.....	.....	.....	.....	.....	3.72	.....	0.91	0	8	4	25	2	sw.	W. M. Nelson.
Monterey	Otero	4,536	2	.....	.....	.....	.....	.....	.....	.....	0.62	.....	0.32	0	2	22	7	2	sw.	Agent, E. P. & S. W. R. R.
Mountainair	Torrance	6,577	9	59.0	.....	89	25	29	1	46	1.14	.....	0.70	0	2	18	12	1	sw.	Mrs. John W. Corbett.
Newman	Otero	3,989	2	.....	.....	102	29	.....	.....	.....	T.	.....	T.	0	0	25	4	2	sw.	Agent, E. P. & S. W. R. R.
Noria	Dona Ana	4,114	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	28	1	2	e.	Do.
Orange	Otero	5,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jas. Brownfield, jr.
Orogrande	....do	4,171	2	.....	.....	.....	.....	.....	.....	.....	0.54	.....	0.50	0	2	15	14	2	w.	Agent, E. P. & S. W. R. R.
Oscura	Lincoln	5,016	2	.....	.....	.....	.....	.....	.....	.....	0.42	.....	0.25	0	4	26	0	5	sw.	Eugene F. Jones.
Otis	Eddy	3,100	2	.....	.....	.....	.....	.....	.....	.....	1.25	.....	0.58	0	6	16	13	2	se.	A. M. Hove.
Otto	Santa Fe	6,200	2	.....	.....	.....	.....	.....	.....	.....	1.88	.....	1.30	0	6	.....	.....	.....	.....	O. H. Johnson.
Pastura	Guadalupe	5,285	2	.....	.....	87	24	.....	.....	.....	0.91	.....	0.53	0	4	.....	.....	.....	sw.	Agent, E. P. & S. W. R. R.
Placitas (near)	Bernalillo	8,000	....	53.8	.....	76	31	25	20	37	0.91	.....	0.50	0	3	21	9	1	w.	Geo. C. Ellis.
Plainview	Chaves	4,300	....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. P. Adair.
Red River Canyon	Taos	8,956	3	48.8	.....	80	27†	18	11	60	0.08	.....	0.04	T.	2	21	9	1	e.	Mrs. L. R. Penn.
Rincon	Dona Ana	4,030	13	69.6	+ 1.7	96	31	36	1	52	0.00	— 0.22	0.00	0	0	13	10	8	w.	Chas. H. Raitt.
Rio Grande Dam	Sierra	4,265	13	70.0	+ 4.2	96	31	42	21†	47	T.	— 0.30	T.	0	0	28	3	0	sw.	U. S. Reclamation Service.
Rio Grande Industrial School.	Bernalillo	5,000	....	62.9	.....	88	24	30	11†	50	0.37	.....	0.37	0	1	21	8	2	s.	Rev. A. C. Heyman.
Rosedale	Socorro	6,910	6	59.1	.....	82	24	33	21	39	0.24	.....	0.13	0	4	17	8	6	w.	W. H. Martin.
Roswell	Chaves	3,578	13	67.5	— 1.9	93	9	39	1	46	3.38	+ 2.21	1.68	0	6	13	14	4	s.	U. S. Weather Bureau.
San Marcial	Socorro	4,439	14	.....	.....	95	31	.....	.....	.....	.....	.....	.....	0	.....	26	3	2	.....	Agent, A., T. & S. F. R. R.
San Rafael	Valencia	6,509	7	59.1	.....	88	23	29	16	52	0.10	.....	0.10	0	1	28	3	0	sw.	Dr. Chas. M. Grover.
Santa Fe	Santa Fe	7,013	38	56.5	— 0.2	78	30	30	11	35	1.00	— 0.11	0.47	0.1	7	18	11	2	se.	U. S. Weather Bureau.
Santa Fe Canyon	....do	8,000	1	.....	.....	.....	.....	.....	.....	.....	1.70	.....	0.80	0	4	17	4	10	w.	C. Martinez.
Santa Rosa	Guadalupe	4,624	11	66.0	.....	93	24	35	1	47	0.42	— 0.42	0.13	0	7	15	16	0	w.	John L. Chapman.
Socorro	Socorro	4,600	19	64.2	— 1.8	91	25†	35	22	48	0.26	— 0.14	0.26	0	1	30	1	0	se.	J. J. Leeson.
Stanley	Santa Fe	6,317	2	57.4	.....	87	21	25	1	48	1.34	.....	0.85	0	7	2	29	0	sw.	Henry Winan.
Strauss	Dona Ana	4,080	12	.....	.....	.....	.....	.....	.....	.....	0.00	— 0.04	0.00	0	0	29	0	2	se.	Agent, Southern Pacific R. R.
Swastika Ranch	Valencia	6,400	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Swastika S. & L. Co.
Taft	Guadalupe	5,000	1	.....	.....	.....	.....	.....	.....	.....	1.03	.....	0.71	0	4	13	16	2	s.	J. F. Nappier.
Tajique (near)	Torrance	6,900	1	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.57	0	2	9	22	0	.....	U. S. Forest Service.
Taos	Taos	6,983	13	56.6	+ 0.8	82	30	30	11†	44	1.28	+ 0.11	0.36	0	8	19	11	1	sw.	Alex Gusdorf.
Taos Canyon	....do	8,959	2	.....	.....	.....	.....	.....	.....	.....	2.37	.....	1.23	1.8	10	.....	.....	.....	.....	Leocadio Martinez.
Tecolote	Lincoln	6,539	2	.....	.....	.....	.....	.....	.....	.....	0.65	.....	0.25	0	4	22	5	4	w.	Agent, E. P. & S. W. R. R.
Tree Rivers	Otero	4,559	2	.....	.....	.....	.....	.....	.....	.....	0.08	.....	0.05	0	2	22	5	4	.....	Do.
Tijeras Canyon	Bernalillo	6,214	1	.....	.....	.....	.....	.....	.....	.....	0.48	.....	0.25	0	3	23	8	0	sw.	U. S. Forest Service.

TABLE 1.—*Climatological data for May, 1911. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New Mexico—Contd.																				
Torrance	Torrance	6,433	2	.....	.....	.....	.....	.....	.....	.....	0.04	.....	0.02	0	2	10	21	0	e.	Agent, E. P. & S. W. R. R.
Tres Piedras	Taos	8,076	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Edwin B. Seward.
Truchas	Rio Arriba	7,935	2	51.7[a]	.....	75	24	.....	.....	.....	0.50	.....	0.20	0	3	22	9	0	.....	Ignacio Cordova.
Tularosa	Otero	4,436	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Irby L. Fairless.
Vaughn	Guadalupe	5,952	2	.....	.....	.....	.....	.....	.....	.....	1.49	.....	0.38	T.	7	13	9	9	w.	Agent, E. P. & S. W. R. R.
Virsylvia	Taos	7,500	1	57.6	.....	84	26	33	15	50	0.54	.....	0.14	1.2	8	23	7	1	s.	Dr. I. N. Woodman.
Winsors	San Miguel	8,200	13	47.4	+ 1.1	76	25	20	3	46	1.53	− 0.16	0.54	0	6	16	6	9	w.	Henry D. Winsor.
Texas.																				
Abilene	Taylor	1,738	26	72.8	+ 0.9	97	19	43	1	35	0.06	− 3.66	0.06	0	1	14	9	8	s.	U. S. Weather Bureau.
Albany	Shackelford	1,429	17	72.6	+ 0.1	101	19†	39	1	42	0.43	− 3.06	0.43	0	1	.....	.....	.....	.....	N. L. Bartholomew.
Alice	Nueces	209	.....	.....	.....	.....	.....	.....	.....	.....	3.60	.....	2.70	0	3	22	6	3	se.	R. M. Boerum.
Alpine	Brewster	4,482	1	.....	.....	.....	.....	.....	.....	.....	2.08	.....	0.98	0	8	20	7	4	se.	J. Frank Doble.
Alvin	Brazoria	49	13	72.8	.....	98	31	53	3	31	2.81	− 0.98	1.04	0	4	22	3	6	se.	Alvin Japanese Nursery.
Anahuac	Chambers	23	2	.....	.....	.....	.....	.....	.....	.....	1.82	.....	0.70	0	3	.....	.....	.....	.....	B. H. Collins.
Antelope	Jack	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.12	.....	0.12	0	1	23	6	2	.....	Chas. C. Hawkins.
Austin	Travis	593	55	73.3	− 1.2	96	31	52	1	27	2.74	− 1.45	2.14	0	3	15	12	4	se.	A. Deussen.
Ballinger	Runnels	1,637	15	72.6	+ 0.1	100	19†	45	1†	48	1.40	− 2.04	1.15	0	2	17	5	9	s.	E. M. Eubank.
Barstow	Ward	2,573	4	73.5	.....	97	18	46	21	42	1.41	.....	0.55	0	3	20	6	5	e.	Lee F. Freeman.
Bay City	Matagorda	53	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. C. Quereau.
Beaumont	Jefferson	29	10	76.0	+ 0.8	100	31	51	10	33	1.71	− 1.50	0.86	0	3	25	0	6	se.	John Bender.
Beeville	Bee	225	15	75.2	− 1.9	96	31	56	3†	30	6.06	+ 2.54	2.83	0	7	8	10	13	e.	L. E. Dickey.
Big Springs	Howard	2,396	13	72.9	0.0	97	19†	42	1†	38	0.32	− 2.94	0.32	0	1	15	13	3	se.	B. Reagan.
Blanco	Blanco	1,350	15	71.4	+ 0.3	98	31	50	1†	34	1.84	− 0.95	0.67	0	4	20	10	1	s.	R. C. Crist.
Boerne	Kendall	1,412	19	74.4	+ 1.8	98	31	54	22	34	1.36	− 2.84	0.72	0	4	12	14	5	se.	F. W. Schweppe.
Booth	Fort Bend	81	10	.....	.....	.....	.....	.....	.....	.....	6.64	+ 1.71	3.65	0	5	27	0	4	e.	T. R. Booth.
Bowie	Montague	1,113	16	75.8	+ 4.7	104	31	41	1	40	0.65	− 4.48	0.40	0	4	19	7	5	s.	Craig Anderson.
Brady	McCullough	1,500	10	.....	.....	.....	.....	.....	.....	.....	0.00	− 2.93	0.00	0	0	28	1	2	s.	G. W. Virling, jr.
Brazoria	Brazoria	25	22	73.5	− 1.1	96	31	53	8†	31	3.22	+ 0.06	1.60	0	8	28	1	2	s.	Mrs. M. A. Stevens.
Brazos	Palo Pinto	801	2	.....	.....	.....	.....	.....	.....	.....	0.48	.....	0.31	0	2	15	14	2	s.	Robt. E. Boyett.
Brenham	Washington	360	26	73.4	− 1.8	94	31	51	3	24	4.52	+ 0.77	1.18	0	8	14	5	12	e.	Mrs. B. F. Sloan.
Bridgeport	Wise	754	2	.....	.....	.....	.....	.....	.....	.....	0.25	.....	0.25	0	1	16	8	7	s.	Claude Strange.
Brighton	Nueces	12	18	76.5	+ 0.2	93	31	54	21	28	6.60	+ 3.68	2.25	0	5	23	4	4	se.	G. H. Ritter.
Brownsville	Cameron	38	47	75.6	− 3.0	94	31	58	3	29	1.84	− 0.31	0.72	0	8	.....	.....	.....	e.	U. S. Weather Bureau.
Brownwood	Brown	1,342	19	71.8	− 0.8	99	31	46	1†	47	1.53	− 2.49	1.25	0	2	11	20	0	s.	Mrs. Pearl Smith.
Cameron	Milam	.....	3	74.6	.....	100	31	48	3	35	2.44	.....	0.90	0	4	26	3	2	s.	J. E. Watts.
Carmona	Polk	330	3	73.2	.....	98	31	46	7	38	4.13	.....	2.75	0	5	21	8	2	s.	M. S. Spitler.
Claytonville	Fisher	2,100	16	72.2	+ 1.2	99	19	40	1†	46	T.	− 3.21	T.	0	0	11	12	8	s.	Wm. Lanius.
Clifton	Bosque	671	.....	.....	.....	.....	.....	.....	.....	.....	1.25	.....	1.21	0	2	8	23	0	s.	R. M. Jones.
Coleman	Coleman	1,710	17	72.0	+ 0.8	97	19	44	1	36	1.57	− 2.38	1.45	0	2	11	18	2	s.	J. E. Stevens.
College Station	Brazos	308	21	74.8	+ 1.2	100	31	49	3	33	2.70	− 1.87	1.29	0	7	19	10	2	s.	Prof. G. S. Fraps.
Colorado	Mitchell	2,066	17	72.1	− 0.6	98	19	40	21	49	0.67	− 1.73	0.67	0	1	.....	.....	.....	s.	R. M. Webb.
Columbia	Brazoria	34	22	72.4	− 2.8	100	31	50	8†	40	3.55	+ 0.56	1.50	0	4	23	6	2	s.	R. B. Loggins.
Columbus	Colorado	206	7	.....	.....	.....	.....	.....	.....	.....	7.40	.....	2.40	0	9	17	7	7	ne.	Mrs. Sophie Bridge.
Corpus Christi	Nueces	20	24	75.0	− 1.5	90	31	57	3	20	3.74	+ 0.96	2.25	0	10	15	11	5	se.	U. S. Weather Bureau.
Corsicana	Navarro	445	22	72.5	− 1.2	97	31	47	3	30	1.60	− 3.66	0.80	0	3	24	3	4	s.	D. H. Winn.
Crockett	Houston	350	7	73.8	.....	100	31	46	3	36	2.71	.....	0.88	0	6	20	9	2	s.	A. M. Rencher.
Cuero	De Witt	177	21	74.8	− 2.3	99	31	53	22	34	2.56	− 1.03	0.71	0	8	20	4	7	s.	H. R. Frobese.
Dallas	Dallas	466	22	73.8	+ 1.0	103	31	44	3†	39	0.87	− 3.47	0.45	0	3	20	0	11	s.	G. A. Eisenlohr.
Danevang	Wharton	145	15	75.3	− 0.9	97	30†	54	7	39	2.75	− 0.53	0.95	0	4	28	3	0	se.	H. P. Hermansen.
Decatur	Wise	1,047	15	.....	.....	.....	.....	.....	.....	.....	0.45	− 4.27	0.30	0	2	24	7	0	.....	Ft. W. & D. City Ry.
Del Rio	Valverde	952	5	77.2	+ 0.3	101	19	54	22	37	0.27	− 2.69	0.27	0	1	5	20	6	se.	U. S. Weather Bureau.
Devine	Medina	653	1	76.7	.....	96	31	53	23	37	1.74	.....	1.05	0	3	20	9	2	se.	M. A. Keller.
Dialville	Cherokee	575	7	72.8	.....	97	31	45	3	32	3.20	.....	2.00	0	3	17	10	4	s.	J. M. B. McKnight.
Dilley	Frio	569	1	.....	.....	.....	.....	.....	.....	.....	0.90	.....	0.60	0	2	.....	.....	.....	.....	John W. Miller.
Dublin	Erath	1,466	15	71.2	− 0.3	97	31	45	1	28	0.00	− 4.03	0.00	0	0	12	18	1	s.	Jno. O. Shafer.
Duval	Travis	820	22	72.4	− 2.7	95	31	49	3	29	0.80	− 3.27	0.62	0	3	15	12	4	se.	J. C. Edgar.
Eagle Pass	Maverick	800	34	78.4	− 1.0	101	19	56	22	35	0.30	− 2.81	0.20	0	2	10	15	6	se.	Charles Tarver.
Eastland	Eastland	1,420	4	71.5	.....	101	19†	43	1†	50	T.	.....	T.	0	0	17	13	1	.....	J. R. Gilbreath.
Edna	Jackson	71	2	.....	.....	.....	.....	.....	.....	.....	1.63	.....	0.86	0	3	.....	.....	.....	.....	E. L. Faires.
El Paso	El Paso	3,762	32	73.0	+ 0.9	95	30	47	1	35	0.39	+ 0.04	0.36	0	3	22	8	1	e.	U. S. Weather Bureau.
Encinal	La Salle	558	3	75.4	.....	101	31	54	22	36	0.63	.....	0.34	0	4	6	23	2	e.	H. C. Braden.
Fairland	Burnet	1,000	22	73.2	+ 0.5	99	31	49	4	37	1.11	− 2.07	0.54	0	4	15	15	1	s.	R. L. Bush.
Falfurrias	Starr	.....	3	76.6	.....	99	20†	56	3	33	1.29	.....	0.45	0	4	14	15	2	se.	W. A. Gardner.
Flatonia	Fayette	465	3	73.6	.....	96	31	53	3	30	3.28	.....	1.12	0	5	13	12	6	s.	Fred W. Laux.
Flint	Smith	483	1	72.8	.....	102	31	46	3	36	2.11	.....	1.12	0	4	24	4	3	s.	F. C. C. Carter.
Floydada	Floyd	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.72	.....	0.85	0	5	.....	.....	.....	.....	F. H. Schmidt.
Fort Clark	Kinney	1,050	40	71.6	− 4.9	99	30	50	13†	36	0.25	− 3.39	0.25	0	1	16	9	6	se.	Post hospital.
Fort McIntosh	Webb	460	43	80.0	− 1.2	102	20	55	22	35	2.00	− 0.38	1.50	0	3	10	15	6	e.	Do.
Fort Stockton	Pecos	3,050	14	72.5	− 1.0	107	31	43	21	46	4.58	+ 3.15	2.55	0	3	5	24	2	se.	H. H. Butz.
Fort Worth	Tarrant	670	16	74.0	+ 0.8	103	31	45	1	35	0.22	− 3.93	0.17	0	5	13	17	1	s.	U. S. Weather Bureau.
Fredericksburg	Gillespie	1,742	22	71.7	− 0.4	94	31	50	2†	38	0.39	− 3.26	0.25	0	3	13	16	2	s.	Arthur Striegler.
Gainesville	Cooke	738	21	73.6	+ 2.9	102	31	43	1	46	0.88	− 4.56	0.70	0	3	.....	.....	.....	.....	J. L. Hickson.
Galveston	Galveston	69	40	75.2	− 0.2	93	31	56	2	17	1.90	− 1.33	0.68	0	7	21	8	2	se.	U. S. Weather Bureau.
Gatesville	Coryell	795	7	72.6	.....	100	31	44	3	39	0.50	.....	0.30	0	2	29	2	0	.....	John Ryan.
Georgetown	Williamson	750	16	72.4	− 1.0	100	31	47	3	38	3.32	− 0.68	1.38	0	5	22	8	1	s.	Prof. R. F. Young.
Gonzales	Gonzales	299	6	.....	.....	.....	.....	.....	.....	.....	3.80	.....	2.55	0	5	11	3	17	s.	J. M. Johnson.
Gorham	McLennan	444	2	73.7	.....	102	31	46	2	36	0.50	.....	0.50	0	1	24	6	1	s.	John Gorham.
Graham	Young	1,040	12	73.8	+ 0.9	105	31	40	20	49	0.59	− 3.63	0.58	0	2	21	10	0	s.	C. W. Johnson.
Grand Falls	Pecos	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. White.
Grand Saline	Van Zandt	399	1	.....	.....	.....	.....	.....	.....	.....	1.88	.....	1.79	0	2	23	6	2	se.	F. E. Whittemore.
Grapevine	Tarrant	670	21	75.2[d]	+ 2.7	105	31	45	1	46[d]	0.71	− 4.23	0.71	0	1	6[e]	19[e]	3[e]	s.	W. J. Crowley.
Greenville	Hunt	550	11	74.0	+ 2.9	103	31	45	1	36	3.07	− 2.35	1.76	0	3	20	0	11	s.	J. P. Regan.
Hallettsville	Lavaca	235	19	75.0	− 1.5	95	31	55	3†	29	4.23	+ 0.13	1.80	0	5	16	9	6	s.	Dr. J. E. Lay.
Hamlin	Jones	1,685	.....	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.70	0	1	.....	.....	.....	.....	W. S. Carruthers.
Harlingen	Cameron	37	.....	.....	.....	.....	.....	.....	.....	.....	2.27	.....	0.70	0	6	21	7	3	se.	Dr. C. W. Letzerich.
Harper	Gillespie	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.41	.....	0.30	0	2	24	0	7	.....	Christian Fritz.
Haskell	Haskell	1,553	16	74.0	+ 1.5	100	28	45	1	48	1.89	− 1.25	1.60	0	2	15	8	8	s.	P. D. Sanders.
Hebbronville	Duval	.....	4	.....	.....	.....	.....	.....	.....	.....	1.61	.....	0.80	0	3	.....	.....	.....	.....	Henry Edds.
Hempstead	Waller	254	7	.....	.....	.....	.....	.....	.....	.....	6.15	.....	2.50	0	8	16	7	8	s.	J. H. Hancock.
Henderson	Rusk	500	2	.....	.....	.....	.....	.....	.....	.....	1.71	.....	0.97	0	2	24	4	3	.....	M. Kangerga.
Hewitt	McLennan	664	16	.....	.....	.....	.....	.....	.....	.....	0.47	− 5.03	0.23	0	3	.....	.....	.....	.....	I. H. Earle.
Hico	Hamilton	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.01	.....	0.01	0	1	18	13	0	s.	John A. Eakins.
Hillsboro	Hill	628	8	75.0	.....	98	31	45	2	35	0.42	.....	0.42	0	1	.....	.....	.....	.....	W. G. Escott.
Hondo	Medina	901	12	73.4	.....	97	31	51	4†	36	2.63	− 1.99	1.23	0	3	17	13	1	se.	H. E. Haass.

TABLE 1.—*Climatological data for May, 1911. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Continued.																				
Houston	Harris	138	21	74.5	− 1.0	97	31	55	3	25	1.82	− 3.29	1.00	0	5	16	12	3	se.	U. S. Weather Bureau.
Huntsville	Walker	400	27	73.0	− 1.4	96	31	49	3	35	2.49	− 2.44	1.00	0	3	22	0	9	se.	W. Y. Barr.
Jayton	Kent		1								0.85		0.60	0	2	21	2	8	e.	Wichita Valley Railway Co.
Jewett	Leon	496	7	74.1		103	31	45	3†	38	2.46		1.26	0	4	17	6	8	s.	Earle Adkisson.
Junction	Kimble	1,645	8	70.6		99	30	42	22	40	1.66		1.00	0	3	21	9	1	s.	Judge John S. Durst.
Kaufman	Kaufman	448	12	74.4	+ 0.8	102	31	46	3	33	0.68		0.40	0	2	24	6	1	s.	B. J. Hubbard.
Kerrville	Kerr	1,650	15	72.4	+ 0.2	95	31	47	22	40	0.51	− 2.99	0.35	0	3	23	5	3	s.	Robert E. Horne.
Knickerbocker	Tom Green	2,050	7	72.8		98	31	43	20	45	T.		T.	0	0	18	11	2	s.	Jos. Tweedy.
Kopperl	Bosque	576	14								1.00	− 4.00	1.00	0	1	16	4	11	s.	T. A. Johnson.
Lagrange	Fayette	276	1								3.49		1.26	0	7	20	5	6	se.	August Hermes.
Lamesa	Dawson	2,500	1								0.11		0.11	0	1					S. D. Austin.
Lampasas	Lampasas	1,026	19	72.4	− 0.5	100	30†	46	3	45	2.86	− 0.80	1.14	0	5	21	1	9	s.	Mrs. K. I. Webber.
La Parra	Cameron	38	9								8.10		6.50	0	3					Jno. G. Kenedy.
Laureles Ranch	Nueces	20	11								2.21	− 0.01	0.90	0	5					Matt Cody.
Liberty	Liberty	38	7	73.2		95	30†	52	7†	35	5.08		2.70	0	6	21	10	0	n.	Mrs. Fannie Sneed.
Llano	Llano	1,040	20	73.8	− 1.0	100	31	50	3	39	0.98	− 1.57	0.90	0	3	19	10	2	se.	E. W. Torrence.
Llano Grande	Hidalgo	86	3	72.8		97	31	52	3	38	2.61		2.20	0	2	13	12	6	se.	M. D. Wardlow.
Long Lake	Anderson	229	6								0.77		0.67	0	2	18	6	7	s.	Geo. W. Ellis.
Longview	Gregg	336	25	74.4	+ 0.6	103	31	47	3	37	1.77	− 2.64	1.34	0	3	25	2	4	se.	C. A. Propst.
Lubbock	Lubbock										0.72		0.41	0	4	18	10	3	s.	A. L. Paschall.
Lufkin	Angelina	325	4	73.3		96	31	47	3	35	2.67		2.16	0	3	25	3	3	s.	T. A. King.
Luling	Caldwell	418	22	73.4	− 2.3	96	31	53	3†	32	3.55	+ 0.23	1.20	0	6	12	11	8	s.	John Carter.
McGregor	McLennan	713	1								0.58		0.33	0	2	28	0	3	s.	W. H. Whitley.
Marathon	Brewster	4,043	1	64.4		86	10	39	3	40	5.80		1.75	0	9	13	14	4	s.	Rev. A. P. Willis.
Marble Falls	Burnet	771	3								1.74		0.70	0	5	15	6	16	n.	R. H. Cochran.
Marfa	Presidio		3								2.95		1.20	0	7					R. K. Colquitt.
Marshall	Harrison	375	2	72.4		98	30	45	3	37	0.95		0.65	0	2	6	23	2	se.	Lee Scott.
Matagorda	Matagorda	12	1								19.09		15.71	0	4	27	0	4	s.	W. E. McNabb.
Mexia	Limestone	537	7	71.4		99	31	44	3	37	1.50		1.22	0	3	10	10	11	s.	Miss Josephine Newman.
Midland	Midland		4																	W. H. Neeb.
Mission	Hidalgo	140	1	77.0		95	31	59	3	29	0.66		0.38	0	6	12	16	3	se.	L. H. Romig.
Mont Belvieu	Chambers	65	1								1.84		0.47	0	6	20	8	3	se.	A. R. Shearer.
Mountain View	Pecos	2,900	1																	Lucius W. Gosselin.
Mount Blanco	Crosby	2,750	22	68.2	0.0	94	31	37	1	40	0.77	− 1.44	0.42	0	3	16	3	12	s.	H. C. Smith.
Nacogdoches	Nacogdoches	271	12	71.0	− 0.9	96	31	47	3†	35	0.61	− 4.53	0.42	0	3	25	3	3	s.	Miss Mary Hofmann.
New Braunfels	Comal	720	22	72.3	− 2.1	94	31	53	3†	30	2.17	− 1.04	1.35	0	3	11	17	3		J. Giesecke.
Palestine	Anderson	510	29	72.2	− 0.3	96	31	46	3	27	0.77	− 4.12	0.66	0	3	17	11	3	s.	U. S. Weather Bureau.
Panter	Hood	1,000	22								0.23	− 3.76	0.23	0	1					E. H. Snider.
Pearsall	Frio	629	1								0.48		0.42	0	2					Earnest De Vilbiss.
Pierce	Wharton	102	5	72.0		96	31	50	3	34	4.92		1.38	0	7	17	12	2		R. B. Pointer.
Plainview	Hale	3,370	15	65.2	− 3.1	89	18†	34	1	47	1.92	− 0.56	0.82	0	6	18	10	3	s.	J. F. Sander.
Port Arthur	Jefferson										2.35		1.21	0	5	15	14	2	s.	Griffing Bros. Co.
Port Lavaca	Calhoun	20	10	76.0	+ 0.1	99	31	54	2	32	4.49	− 0.04	2.30	0	4	23	5	3	se.	J. H. Bickford.
Post City	Garza	2,700	1								0.04		0.04	0	1	24	6	1	sw.	W. L. Dodd.
Putnam	Callahan	1,591									0.02		0.01	0	2	18	11	2	s.	Rev. Jos. Reisdorff.
Raymondville	Cameron										2.90		1.20	0	7	3	23	5	se.	C. H. Pease.
Ricardo	Nueces	57	2	78.5		98	31	61	3†	28	3.48		1.69	0	8	18	9	4	se.	Lindsay Waters.
Riverside	Walker	169	7								3.45		1.45	0	4	28	1	2	s.	Mrs. C. W. Higdon.
Robert Lee	Coke	1,850	12	74.2	+ 2.3	99	19	44	1	47	0.37	− 2.96	0.37	0	2	25	3	3	se.	H. D. Pearce.
Rockland	Tyler	136	7								3.83		1.50	0	4	20	7	4	s.	T. W. Bellamy.
Rockport **	Aransas	12	10	75.3	− 0.2	92	31	56	3	20	1.83	− 1.50	1.06	0	3	22	8	1	se.	Mrs. G. B. Grewe.
Rossville	Atascosa	558	4	74.4		98	31	52	23	43	2.60		1.22	0	6	6	23	2	se.	W. F. M. Ross.
Runge	Karnes	308	16								2.72	− 2.77	1.56	0	3					Reiffert & Frobese.
Sabinal	Uvalde	964	7	75.0		98	31	51	22	37	1.24		0.83	0	3	5	13	13	se.	Jas. Johnston.
Salado	Bell		1								1.03		0.90	0	2	16	1	14	s.	L. M. Crockett.
San Angelo	Tom Green	1,847	20	74.1	+ 0.4	98	31	47	21	34	0.04	− 3.12	0.04	0	1	21	10	0	s.	Sam Crowther.
San Antonio	Bexar	701	26	74.0	− 0.8	96	31	54	2	32	2.01	− 0.95	1.02	0	6	7	4	20	se.	U. S. Weather Bureau.
San Augustine	San Augustine	360	2	72.9		98	30	46	8	39	1.64		1.29	0	4	16	13	2		F. A. Wilson.
San Diego	Duval	312		79.6		99	31	60	3	23	2.96		1.87	0	4	23	2	6	e.	J. M. Palacios.
San Juanito	Hidalgo		2	81.0		102	31	56	22	30	1.02		0.46	0	6	1	4	26	se.	J. B. McAllen.
San Marcos	Hays	588	18	72.6	− 1.6	94	31	52	3	32	2.52	− 1.61	1.46	0	4	17	0	14	s.	Miss L. C. Ford.
San Saba	San Saba	1,712	10	71.8	− 0.8	97	31	45	21	38	0.64	− 3.17	0.52	0	2	24	6	1	s.	Jas. Burns.
Santa Gertrudes	Nueces		11																	J. B. Wright, jr.
Sealy	Austin	201									2.44		0.73	0	11	17	8	6	s.	O. H. Albert.
Seymour	Baylor	1,320	5	72.5		101	31	35	2	50	1.06		0.59	0	2	5[j]	0[j]	16[j]	s.	S. C. Lee
Snyder	Scurry			73.8[e]		98	30†	41	21	49	0.26		0.15	0	2	12[f]	2[f]	11[f]	se.	J. Allen Weaver.
Somerville	Burleson	251	2	73.0		97	2†	41	8	51	2.40		2.00	0	2	21	0	10	s.	W. A. Dolan.
Sonora	Sutton	2,200	8																	Mike Murphy.
Spur	Dickens	2,300		70.7		97	31	41	1	42	1.15		0.43	0	4	17	9	5	s.	J. D. Reagan.
Stamford	Jones			70.8		96	31	42	1	36	0.42		0.42	0	1	11	19	1		T. A. Williams.
Sugarland	Fort Bend	79	13																	Cunningham Sugar Co.
Sutherland Springs **	Wilson		1	77.1		100	31	52	23	38	2.73		1.62	0	4	22	3	6	s.	W. A. Clark.
Taylor	Williamson	583	10	72.8	− 1.5	96	31	47	3	29	2.85	− 1.16	2.08	0	5	17	11	3	s.	U. S. Weather Bureau.
Temple	Bell	630	21	74.2	+ 1.3	102	31	48	3	30	2.09	− 2.24	0.97	0	4	16	13	2		W. Goodrich Jones.
Theodore	Winkler		1								1.41		0.54	0	4					W. H. Gibbs.
Thurber	Erath		1								0.02		0.02	0	1					J. K. Ball.
Tilden	McMullen		5	76.4		103	30	47	22	44	1.45		0.95	0	3	3[a]	18[a]	9[a]	se.	Wm. Kuykendall.
Tivoli	Refugio		1								3.07		1.73	0	3	10	11	10		W. H. Gisler.
Uvalde	Uvalde	937	3			100	31				0.53		0.53	0	1					F. M. Getzendaner.
Valentine	Jeff Davis	4,421	5																	Valentine Development Co.
Valley Junction	Robertson	289	11								1.80	− 3.79	1.10	0	2	21	0	10	s.	T. M. Williams.
Victoria	Victoria	187	12	75.2	− 0.8	98	31	52	7	33	3.02	− 0.99	2.10	0	3	20	0	11	s.	C. C. Zirjacks.
Waco	McLennan	424	22	75.1	0.0	101	31	48	3	35	1.62	− 3.38	0.90	0	4	21	1	9	s.	E. H. Hall.
Waxahachie	Ellis	556	14	73.1	0.0	103	31	44	3	40	1.92	− 3.49	0.90	0	3	18	5	8	se.	C. D. Longserre.
Weatherford	Parker	864	22	74.6	+ 3.0	102	31	44	1	41	1.14	− 3.77	0.64	0	3	23	5	3	n.	Miss J. Stickfort.
Wharton	Wharton	105	9	73.8		96	31	50	8	35	3.81		0.99	0	5	19	2	10	s.	Mrs. F. M. Hughs.
Wills Point	Van Zandt	524	6	71.8		100	31	43	3	40	0.62		0.57	0	2	22	6	3	s.	W. W. Gibbard.
Zapata	Zapata	300	2																	A. P. Spohn.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 8, Texas and Rio Grande Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado.																																	
Blanca	Rio Grande					T.		.05	.01					T.	.16	.10				.01	.08					.01			T.	.08		.09	0.59
Cumbres	do						.02	.31	.03					.02	.19					T.	.26					.23						.15	1.21
Garnett	do						T.	.24							.16						T.											.60	1.00
Hermit	do						.15	.09	.11					.07	.31	T.				T.						T.	.05		T.			.15	0.93
La Veta Pass	do							.20	.20						.19					.30						.12	.08		T.	.08			1.17
Manassa	do							T.							.20						.10								T.	T.		.08	0.38
Platoro	do							.33	.12				.04	.12	.09	.07											.10	.27		T.		.16	1.30
Saguache	do							T.	T.							.11											T.						0.11
San Luis	do						T.	.16	T.						.24	.03					.10	T.				.04	.07			.02		.07	0.73
Wagon Wheel Gap Experiment Station.	do						.28	.10	T.					.02	.11					T.	T.					.08	.06			T.			0.65
New Mexico.																																	
Agricultural College	Rio Grande									.07																T.						.03	0.10
Alamogordo (near)	do								T.						.12	.49													.18		.15	0.94
Alamogordo	do														T.															.16		.27	0.41
Alamos Ranch	do														.10						.06					.09			.22		.01	.14	0.62
Albuquerque	do					.04	T.	T.	T.				T.																			.24	0.28
Ancho	do																														.02		0.02
Artesia	Pecos													.02	.05	.40														.15			0.62
Aspen Grove Ranch	Rio Grande													.01	.21						.11								T.				0.33
Bateman's Ranch	do						T.	T.					.20		.51						.04					.04			T.				0.79
Bluewater	do						.10	T.					.20	T.												.02							0.32
Boaz	Pecos												.24	.28	.13	.42	.21													1.84			3.12
Capitan	do																												10		.90		1.00
Carlsbad	do												T.	.48	.70	.12												.04	T.	.01			1.35
Carrizozo	Rio Grande																														T.	T.	T.
Carson Park	do																																
Chama	do						T.	.18	.13				T.		.10											T.	.08						0.49
Cloudcroft	Pecos																				T.											T.	
Corona	do			.01											.21																	.26	0.48
Coyote	Rio Grande							11																							.02	.13	0.26
Cundiyo	do							.04						.11	T.														T.	.13		.14	0.42
Demonstration Farm.	Pecos							.25					.28	.40	.12						.10								.50	.50	.25	.10	2.50
Duran	do							T.	.10					.23	T.														T.	T.		T.	0.33
Elk (near)	do																																
Escondido	Rio Grande														.48												.05			.08		.13	0.74
Espanola	do								T.					.28							.07								.07	.17		0.59
Estancia	do												.16					.09				.03									.05		0.33
Fort Stanton	Pecos								.14					.03	.01															.12	.14	.31	0.75
Fort Sumner	do												T.	.44	1.11														T.	.10	.08	T.	1.73
Gallinas	do																																0.00
Gallinas Planting Station.	do							.07			.36	*	.64	.30							.10					T.			.20	.30	.37	.20	2.54
Glorieta Ranch	Rio Grande																																0.00
Harvey's Upper Ranch.	Pecos				T.			.26	.37				.06		.42						.18					.11			.32	.18	.19	.61	2.70
Hillsboro	Rio Grande																																
Hodges	do																																
Hondo Reservoir	Pecos												.30	T.	.60	.59	.13	T.											.03	1.39			3.04
Hope	do																																
Jemez Springs	Rio Grande					T.		.25		.01			.50	.03	.04						T.					.01	.03						0.87
Knowles	Pecos												T.	T.	.20	T.					T.							.48		T.			0.68
Laguna	Rio Grande						T.	.15					T.																				0.15
Lagunita	Pecos														.13																	.12	0.25
Lake Valley	Rio Grande																									T.						T.	T.
Las Vegas	Pecos							.24		.03			.49	.14	.55						.13	.01				T.	.01		.45	.05		.31	2.41
Liston	do													.71	.36	.30												*	2.12	.12	.84		4.45
Los Lunas (near)	Rio Grande										T.																						T.
Magdalena	do						T.	T.																	T.								T.
Mescalero	do																																
Mineral Hill	Pecos							.34			.31		.12	.44															.50	.91	.55	.55	3.72
Monterey	Rio Grande													T.	.30												T.			.32		T.	0.62
Mountainair	do								.70																							.44	1.14
Newman	do													T.																			T.
Noria	do																																0.00
Orange	do																																
Orogrande	do																								.04				T.		T.	.50	0.54
Oscura	do					.02									.25																.06	.09	0.42
Otis	Pecos													.18	.58	.11	.02	T.										T.	.34	.02			1.25
Otto	Rio Grande					.10				.18			.11		.10																.09	1.30	1.88
Pastura	Pecos							T.	.20					.53	.08																.10		0.91
Placitas (near)	Rio Grande							.50						.03	T.																T.	.38	0.91
Plainview	Pecos																																
Red River Canyon	Rio Grande						T.	T.							.04					T.	T.											.04	0.08
Rincon	do																																0.00
Rio Grande Dam	do																														T.		T.
Rio Grande Industrial School.	do																															.37	0.37
Rosedale	do							13	.03																	.01				T.	.07	0.24
Roswell	Pecos												.18		1.21	.02	.01												.30	1.66	T.		3.38
San Marcial	Rio Grande																																
San Rafael	do					T.	T.	.10																									0.10
Santa Fe	do						T.	T.	.03				.02	T.	.25						.11					.01			.11		T.	.47	1.00
Santa Fe Canyon	do							T.			T.			T.	.80						T.					T.			.30		.10	.50	1.70
Santa Rosa	Pecos								.10				T.	.04	.13	.04					T.					T.				.07	.01	.03	0.42
Socorro	Rio Grande															.26																	0.26
Stanley	do					.03		.08	.19				.05	.03	.11																	.85	1.34
Strauss	do																																0.00
Swastika Ranch	do																																
Taft	Pecos													T.	.29	.42														.07		.25	1.03
Tajique (near)	Rio Grande							.57	.23																								0.80
Taos	do							36					.10	.10	.27						.04					.02			.06			.33	1.28
Taos Canyon	do							27					.02	.05	.43						.27	.01					.04		.04	.01		1.23	2.37
Tecolote	do							.05						.10	.25																	.25	0.65
Three Rivers	do					T.								T.													T.				.05	.03	0.08
Tijeras Canyon	do					T.		.25	.03						T.																	.20	0.48
Torrance	Pecos						T.	T.							.02											T.						.02	0.04
Tres Piedras	Rio Grande																																
Truchas	do							T.	T.				T.		.10											T.				.20	T.	.20	0.50
Tularosa	do																																
Vaughn	Pecos							.06	.03	.30			T.	.34	.38					T.											.33	.05	1.49
Virsylvia	Rio Grande					.01	.04			.02					.12						.14					10				.01	.10		0.54
Winsors	Pecos							31		.22				.19	.22							T.							T.	.54		.05	1.53

TABLE 2.—*Daily precipitation for May, 1911. District No. 8*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas.																															
Abilene	Brazos																T.											.06	T.				0.06
Albany	....do																											T.	.43				0.43
Alice	Coast		.50															.40			2.70												3.60
Alpine	Pecos	.15								.05				.29	.98		.01		.04								.01	.55					2.08
Alvin	Coast	.23	.74									1.04									.80												2.81
Anahuac	....do		.50										.70									.62											1.82
Antelope	Trinity																												.12	T.			0.12
Austin	Colorado		.57										2.14						.03										.25	1.15			2.74
Ballinger	....do																											.46					1.40
Barstow	Pecos													.55		.40																	1.41
Bay City	Colorado																																
Beaumont	Neches	.40		.45									.86																				1.71
Beeville	Coast	.92		.58									2.83	.10					.05	.11		1.47	T.					T.			T.		6.06
Big Springs	Colorado														.32						T.												0.32
Blanco	Guadalupe	.67		.48									.64						.05														1.84
Boerne	San Antonio	.12		.72								.38																					1.36
Booth	Brazos	1.34	.05	.45									3.65						.14	T.													6.64
Bowie	Trinity										.16										.40	1.15							.04	.05			0.65
Brady	Colorado																																0.00
Brazoria	Brazos	.44	.40	.36	.01							.01	.23									1.60						T.	.17				3.22
Brazos	....do	.17										.31																					0.48
Brenham	....do	.99	T.	.95									1.18	.37			T.	T.		.19		.67						T.	.15	.02	T.		4.52
Bridgeport	Trinity											.25																					0.25
Brighton	Coast	.61	1.80										1.89									2.25	.02										6.60
Brownsville	Rio Grande	.47	.14	.21	.02								.72									.20					.02		.06	T.			1.84
Brownwood	Colorado	1.25											.28																				1.53
Cameron	Brazos	.88		.90									.36									.30											2.44
Carmona	Neches	.19	.72									2.75			T.	T.	T.			.02	T.	.45				T.		T.					4.13
Claytonville	Brazos														T.				T.										T.				T.
Clifton	do		.04									1.21																1.45	.12				1.25
Coleman	Colorado		T.									T.															.01		.01				1.57
College Station	Brazos		.98	.07									1.29				T.				.03	.31											2.70
Colorado	Colorado	.67													T.																		0.67
Columbia	Brazos		.75									1.50									1.00								.30				3.55
Columbus	Colorado	2.40	.04	.56									2.30	.34						.04		1.28						.04	T.	.40			7.40
Corpus Christi	Coast		.28	.02					.03				2.25				.10	.01	T.		.68	.16					.06			.15			3.74
Corsicana	Trinity	.80											.43									.37											1.60
Crockett	....do		.27									.88	.39				T.				.60					.47			.10				2.71
Cuero	Guadalupe	.70	.01	.51								T.	T.	.05	T.					.45		.45							.05				2.56
Dallas	Trinity	.45											.34									.27								.15			0.87
Danevang	Coast	.95		.75									.15								.90												2.75
Decatur	Trinity														.30				.15														0.45
Del Rio	Rio Grande		.27														T.																0.27
Devine	Nueces	T.	.62	T.							T.	T.						1.05	.07		.80								.40				1.74
Dialville	Neches		T.								2.00																						3.20
Dilley	Nueces		.60																.30														0.90
Dublin	Brazos																																0.00
Duval	Colorado		.62								T.	.16	T.					T.	.02									T.					0.80
Eagle Pass	Rio Grande		.10										.20																T.	T.			0.30
Eastland	Brazos	T.																															T.
Edna	Lavaca		.86									.33						T.			.44						.01		T.		T.	.36	1.63
El Paso	Rio Grande							T.	T.						.02																		0.39
Encinal	Nueces		.34	.06									.07						.16										T.	T.			0.63
Fairland	Colorado		.54									T.	.04					.51	.02									T.					1.11
Falfurrias	Coast		.42	.05									T.					T.	.37			.45											1.29
Flatonia	Guadalupe		.54									T.	1.12						.87		.23							.52					3.28
Flint	Neches											1.12									.75					.21		.03					2.11
Floydada	Brazos														.30	.04											.85	.01		.52			1.72
Fort Clark	Rio Grande	.25	T.												T.														T.				0.25
Fort McIntosh	....do		.30										T.		1.10	T.			.02		.20	1.50											2.00
Fort Stockton	Pecos		T.																			T.					2.55		.93				4.58
Fort Worth	Trinity										.13	.04		T.				.02		.02		.01							T.	T.			0.22
Fredericksburg	Colorado		.25											.08						.06		.70							.13				0.39
Gainesville	Trinity	.05																				.37	.31					.15					0.88
Galveston	Coast	.02	.62	.01								.42								.30													1.90
Gatesville	Brazos		.20																		.05									T.			0.50
Georgetown	....do	1.18		.66									1.38		.05																		3.32
Gonzales	Guadalupe	.07		.79									2.55						.25		.14												3.80
Gorham	Brazos		T.									.50							T.			T.											0.50
Graham	....do											.58			.01																		0.59
Grand Falls	Pecos																																
Grand Saline	Sabine											.09									1.79												1.88
Grapevine	Trinity																				.71								T.				0.71
Greenville	Sabine	.55										1.76										.76											3.07
Hallettsville	Lavaca		.35		T.							T.	1.80				T.	1.15			.88						T.	T.	.05				4.23
Hamlin	Brazos																												.70				0.70
Harlingen	Coast	.70	.34												.24							.50						.24	.25				2.27
Harper	Colorado		.30									.11																					0.41
Haskell	Brazos											.29																		1.60			1.89
Hebbronville	Coast		.51											.30					.80														1.61
Hempstead	Brazos	2.50	T.	.80											1.10	.40			.20	T.		.60				T.			.25	.30			6.15
Henderson	Neches											.97									.74												1.71
Hewitt	Brazos		.23									.17							T.	.07	T.												0.47
Hico	....do		T.									T.							T.	.01													0.01
Hillsboro	....do											.42																					0.42
Hondo	Nueces			1.18									.22						1.23									T.					2.63
Houston	Coast		.40									.35	T.				T.		.07	T.	.95	.05								T.			1.82
Huntsville	Trinity	T.		1.00									.59	T.		.25						.90							.60				2.49
Jayton	Brazos																				T.						.05		.10				0.85
Jewett	Trinity	.45		.60								1.26																					2.46
Junction	Colorado	1.00	.40										.26								.40								T.				1.66
Kaufman	Trinity											.28																					0.68
Kerrville	Guadalupe			.35									.11								.05					T.			T.				0.51
Knickerbocker	Colorado		T.									T.				T.	T.																T.
Kopperl	Brazos	1.00																															1.00
Lagrange	Colorado		.70									.39	1.26			.11			T.	.11		.81					T.	.17		.05			3.49
Lamesa	....do													.70							.08								T.				0.11
Lampasas	Brazos	1.14	.88	.06									6.50						.60														2.86
La Parra	Coast		1.00										.90									.60											8.10
Laureles Ranch	....do	.27	.38	.06									.22	.76								.10	.70							T.			2.21
Liberty	Trinity	2.70		.60									.02								T.												5.08
Llano	Colorado	.90	T.	.06																													0.98

TABLE 2.—*Daily precipitation for May, 1911. District No. 8*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Continued.																																	
Llano Grande ‖	Rio Grande	2.20	....	.41	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2.61
Long Lake ‖	Trinity	....	....	.10	....	....	....	....	....	....	....	....	.67	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.77
Longview ‖	Sabine	.15	....	....	....	....	....	....	....	....	....	....	1.34	....	....	....	....	....	....	....	....	.28	....	....	....	....	....	....	....	....	....	....	1.77
Lubbock	Brazos	....	....	....	....	....	....	....	....	....	....	....	....	....	.41	.03	....	....	....	....	....	....	....	....	....	....	.25	.63	....	T.	....	....	0.72
Lufkin	Neches	....	.29	....	....	....	....	....	....	....	....	2.16	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	22	....	....	....	2.67
Luling ‖	Guadalupe	.84	.07	.80	....	....	....	....	....	....	....	....	1.20	....	....	....	....	....	....	.60	....	....	....	....	....	....	....	.04	....	....	....	....	3.55
McGregor	Brazos	....	.25	....	....	....	....	....	....	....	....	.33	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.58
Marathon	Rio Grande	....	.40	1.30	....	....	....	....	....	....	T.	....	....	....	1.75	.20	.01	.04	....	....	....	....	....	....	....	....	1.00	.40	.70	....	....	....	5.80
Marble Falls ‖	Colorado	.79	.02	.55	....	....	....	....	....	....	....	....	.16	....	....	....	....	....	.31	....	....	....	....	....	....	....	....	....	....	....	....	....	1.74
Marfa	Rio Grande	.10	....	....	....	....	....	....	....	....	....	....	....	1.20	.15	....	.20	....	....	....	....	....	....	....	....	....	.60	.40	....	.30	....	....	2.95
Marshall	Sabine	....	....	....	....	....	....	....	....	....	....	....	.65	....	....	....	....	....	....	....	....	.30	....	....	....	....	....	....	....	....	....	....	0.95
Matagorda	Coast	15.71	.60	.60	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2.18	....	....	....	....	....	....	....	....	....	....	19.09
Mexia ‖	Brazos	....	....	.18	....	....	....	....	....	....	....	....	1.22	....	....	....	....	....	....	....	....	.10	....	....	....	....	....	....	....	....	....	....	1.50
Midland	Colorado	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mission ‖	Rio Grande	.02	.17	.38	.03	....	....	....	....	....	....	....	....	.04	....	....	....	....	....	....	....	.02	T.	....	....	....	....	....	....	....	....	....	0.66
Mont Belvieu	Coast	.17	.38	....	....	....	....	....	....	....	....	.47	.12	....	....	....	....	....	....	.25	.45	....	....	....	....	....	....	....	T.	....	....	....	1.84
Mountain View	Pecos	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Mount Blanco	Brazos	....	....	....	....	....	....	....	....	....	....	....	....	....	.42	.21	....	....	....	....	....	....	....	....	....	....	.14	....	....	....	....	....	0.77
Nacogdoches ‖	Neches	.10	....	T.	....	....	....	....	....	....	....	....	.42	....	....	....	....	....	....	....	....	....	.09	....	....	....	T.	....	....	....	....	....	0.61
New Braunfels	Guadalupe	....	.78	....	....	....	....	....	....	....	....	....	1.35	....	....	....	....	.04	....	....	....	....	....	....	....	....	....	....	....	T.	....	....	2.17
Palestine	Trinity	....	.01	....	....	....	....	....	....	....	....	.66	....	....	....	....	....	....	....	....	.10	....	....	....	....	T.	....	....	T.	....	....	....	0.77
Panter	Brazos	....	....	....	....	....	....	....	....	....	....	.23	T.	....	....	....	T.	T.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.23
Pearsall	Nueces	....	.42	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.06	....	....	....	....	....	....	....	....	....	....	....	0.48
Pierce	Colorado	1.12	.76	.15	....	....	....	....	....	....	....	1.38	....	....	....	....	....	....	....	....	....	1.33	....	....	....	....	....	.06	.12	....	....	....	4.92
Plainview	Brazos	....	....	....	....	....	....	....	....	....	....	....	....	.01	.13	.16	....	....	....	....	....	T.	....	....	....	....	.75	....	....	.05	.82	....	1.92
Port Arthur	Coast	.30	....	.54	....	....	....	....	....	....	....	....	1.21	....	....	....	....	....	....	.02	....	....	....	....	....	....	....	....	....	.28	....	....	2.35
Port Lavaca	....do	.39	2.30	.20	....	....	....	....	....	....	....	T.	T.	....	....	....	....	....	....	....	1.60	....	....	....	....	....	....	....	....	....	....	....	4.49
Post City	Brazos	....	....	....	....	....	....	....	....	....	....	....	....	....	T.	.04	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.04
Putnam	....do	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.01	.01	....	....	....	0.02
Raymondville ‖	Coast	.08	.57	.63	T.	....	....	....	....	....	....	....	....	T.	....	....	....	.04	....	....	....	1.20	....	....	....	....	.05	....	....	.33	....	....	2.90
Ricardo	....do	....	.47	.08	....	....	....	....	.33	....	....	T.	1.69	....	....	....	....	.16	.35	....	....	.37	....	....	....	....	T.	.03	....	....	....	....	3.48
Riverside ‖	Trinity	....	....	1.00	....	....	....	....	....	....	....	....	.45	.55	....	....	....	....	....	....	....	1.45	....	....	....	....	....	....	....	T.	....	....	3.45
Robert Lee ‖	Colorado	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.31	.06	....	....	....	0.37
Rockland ‖	Neches	.70	....	....	1.18	....	....	....	....	....	....	....	....	1.50	....	....	....	....	....	....	....	....	45	....	....	....	....	....	....	....	....	....	3.83
Rockport	Coast	....	....	1.06	....	....	....	....	....	....	....	....	.70	....	....	....	....	....	....	....	.07	....	....	....	....	....	....	....	....	....	....	....	1.83
Rossville	Nueces	....	.78	....	....	....	....	....	....	....	....	.01	1.22	T.	....	....	T.	.12	.27	....	....	....	....	....	....	....	....	....	....	.20	....	....	2.60
Runge	San Antonio	....	.33	....	....	....	....	....	....	....	....	....	.83	....	....	....	....	....	....	....	1.56	....	....	....	....	....	....	....	....	....	....	....	2.72
Sabinal	Nueces	....	.83	....	....	....	....	....	....	....	....	....	.36	....	....	....	....	....	.05	....	....	....	....	....	....	....	....	....	....	....	....	....	1.24
Salado	Brazos	....	.90	....	....	....	....	....	....	....	....	....	.13	T.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.03
San Angelo	Colorado	....	....	....	....	....	....	....	....	....	....	T.	....	....	....	....	.04	....	....	....	....	....	....	....	....	....	....	T.	....	....	....	....	0.04
San Antonio	San Antonio	....	.86	....	....	....	....	....	....	....	....	.47	.55	.03	....	....	....	.09	.01	....	T.	....	....	....	....	....	....	....	....	....	....	....	2.01
San Augustine	Neches	....	.09	.01	....	....	....	....	....	....	....	.25	....	....	....	....	....	....	....	T.	T.	1.29	....	....	....	....	....	....	....	....	....	....	1.64
San Diego ‖	Coast	....	....	.80	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.23	.06	....	1.87	T.	....	....	....	....	....	....	....	....	....	2.96
San Juanito	....do	.03	.46	.09	....	....	....	....	....	....	....	....	T.	....	....	....	....	....	....	....	.10	.31	....	....	....	T.	....	....	.03	....	....	....	1.02
San Marcos ‖	Guadalupe	.57	.06	.43	....	....	....	....	....	....	....	....	1.46	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2.52
San Saba	Colorado	....	.52	....	....	....	....	....	....	....	....	....	.12	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.64
Santa Gertrudes ‖	Coast	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sealy	Brazos	.02	.40	T.	....	....	....	....	....	....	....	.44	.73	....	....	....	....	....	.02	....	.48	.04	....	....	....	T.	.02	.08	.19	.02	....	....	2.44
Seymour	....do	....	....	....	....	....	....	....	....	....	T.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.59	.47	....	....	....	1.06
Snyder ‖	Colorado	....	....	....	....	....	....	....	....	....	....	....	....	....	.11	....	....	....	....	....	....	....	....	....	....	....	....	....	.15	....	....	....	0.26
Somerville	Brazos	....	.40	....	....	....	....	....	....	....	....	....	....	....	2.00	....	....	....	....	....	T.	....	....	....	....	....	T.	T.	....	....	....	....	2.40
Sonora	Rio Grande	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Spur ‖	Brazos	....	....	....	....	....	....	....	....	....	....	....	....	....	.43	.28	....	....	....	....	....	....	....	....	....	....	.08	....	....	.36	T.	....	1.15
Stamford	....do	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	42	....	....	....	0.42
Sugar Land ‖	....do	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Sutherland Springs	San Antonio	....	.93	....	....	....	....	....	....	....	....	....	1.62	....	....	....	....	.15	.03	....	....	....	....	....	....	....	....	....	T.	T.	....	....	2.73
Taylor	Brazos	....	.72	.01	....	....	....	....	....	....	....	2.08	....	T.	....	....	....	.03	T.	....	.01	....	....	....	....	....	....	....	T.	T.	....	....	2.85
Temple ‖	....do	.94	.97	....	....	....	....	....	....	....	....	....	.03	....	....	....	....	....	.15	T.	T.	....	....	....	....	....	....	....	....	....	....	....	2.09
Theodore	Pecos	....	....	....	....	....	....	....	....	....	....	....	....	.54	....	.03	....	....	....	....	....	....	....	....	....	....	.30	.54	....	....	....	....	1.41
Thurber	Brazos	....	.02	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.02
Tilden	Nueces	....	.95	....	....	....	....	....	....	....	....	....	.10	....	....	....	....	.40	....	T.	....	T.	....	....	....	T.	....	....	T.	....	....	....	1.45
Tivoli ‖	Guadalupe	....	1.05	....	....	....	....	....	....	....	....	....	....	....	....	.29	....	....	....	....	1.73	....	....	....	....	....	....	....	....	....	....	....	3.07
Uvalde	Nueces	....	.53	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	T.	T.	....	....	0.53
Valentine	Rio Grande	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
Valley Junction ‖	Brazos	....	....	1.10	....	....	....	....	....	....	....	....	.70	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	1.80
Victoria ‖	Guadalupe	.80	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	2.10	....	....	....	....	....	....	....	....	.12	....	....	3.02
Waco ‖	Brazos	.90	....	.06	....	....	....	....	....	....	....	....	.42	....	....	....	....	....	....	....	....	.24	....	....	....	....	....	....	....	....	....	....	1.62
Waxahachie	Trinity	.64	....	....	....	....	....	....	....	....	....	....	.90	....	....	....	....	....	....	....	....	.38	....	....	....	....	....	....	....	....	....	....	1.92
Weatherford	....do	.47	....	....	....	....	....	....	....	....	....	.64	.03	....	....	....	....	....	....	T.	....	....	....	....	....	....	....	....	....	....	....	....	1.14
Wharton ‖	Colorado	....	....	.72	....	....	....	....	....	....	....	....	.99	.67	....	....	....	....	....	....	....	.90	....	....	....	....	....	....	.53	....	....	....	3.81
Wills Point	Sabine	....	....	....	....	....	....	....	....	....	....	.57	....	....	....	....	....	....	....	....	.05	....	....	....	....	T.	....	....	T.	....	....	....	0.62
Zapata	Rio Grande	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures for May, 1911. District No. 8, Texas and Rio Grande Valley.*

Date.	Colorado.				New Mexico.														Texas.							
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountain-air.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Springs.		Browns-ville.		Corpus Christi.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	59	24	60	27	77	35	75	45	59	32	69	29	67	34	67	39	61	38	64	35	68	43	75	42	83	73	75	70
2....	66	21	63	28	82	42	79	54	72	32	72	32	70	38	78	45	65	40	76	39	67	53	74	42	83	62	71	59
3....	70	22	65	24	85	36	87	50	78	34	68	40	75	44	83	49	70	36	84	45	74	49	81	53	70	58	72	57
4....	73	23	74	28	88	38	85	55	76	33	71	37	75	45	80	48	73	40	78	48	75	54	80	62	80	65	78	67
5....	77	29	75	35	86	61	80	59	74	42	71	42	73	45	77	57	71	50	80	56	78	53	83	55	80	62	76	67
6....	77	39	73	38	84	51	84	55	75	38	79	45	73	46	84	50	70	47	85	49	80	58	84	56	81	61	77	70
7....	70	34	68	37	88	61	84	54	75	42	81	47	69	46	84	52	71	51	83	52	80	58	84	54	81	62	77	72
8....	71	40	71	37	88	54	85	55	75	41	63	42	73	44	84	50	73	47	82	51	81	58	82	56	82	64	77	73
9....	76	36	71	42	89	56	96	56	73	44	70	48	74	47	93	52	73	50	87	51	85	61	89	59	83	63	78	71
10....	61	40	63	44	85	55	92	62	71	48	74	33	72	52	86	54	61	39	78	55	92	64	94	64	83	67	78	72
11....	71	20	65	22	86	48	87	53	69	41	75	36	72	35	79	49	65	30	75	41	80	62	86	58	84	73	80	74
12....	71	32	70	33	88	65	85	60	75	45	76	44	70	45	80	56	70	47	81	50	86	62	86	59	85	73	85	69
13....	72	36	72	36	90	52	86	62	81	38	72	45	76	43	83	57	70	43	84	58	83	67	88	59	84	72	80	75
14....	72	30	63	37	85	62	74	61	68	47	78	52	73	46	73	56	66	46	74	59	83	66	82	60	84	66	79	75
15....	72	30	65	35	84	43	79	60	76	40	74	40	73	43	79	55	70	45	79	52	83	68	74	62	86	64	82	72
16....	71	23	67	28	86	39	81	56	80	35	80	34	76	37	83	55	69	38	83	45	82	66	82	59	86	61	81	74
17....	76	27	72	31	89	49	84	54	82	39	83	42	78	41	85	52	73	47	88	50	85	64	86	60	92	66	80	76
18....	74	34	71	35	88	46	93	56	81	37	84	41	78	52	89	53	74	39	87	50	89	66	95	63	89	70	82	74
19....	62	38	64	38	86	54	91	60	80	51	77	52	76	48	90	54	62	42	82	54	97	69	97	63	85	72	82	75
20....	57	30	53	29	74	45	89	54	70	45	67	34	63	37	69	47	55	32	70	46	76	54	87	56	88	74	81	66
21....	66	23	60	27	77	39	75	46	71	27	70	30	67	33	72	43	61	31	72	40	77	47	78	44	81	65	72	63
22....	71	27	71	26	85	40	89	46	80	29	79	39	72	39	85	43	69	36	83	43	90	55	91	53	83	60	80	60
23....	77	36	74	38	90	48	91	49	84	32	71	43	80	45	91	45	75	43	91	43	92	65	89	61	87	64	80	68
24....	78	36	75	37	93	59	91	55	84	31	70	49	82	47	91	49	77	47	93	54	90	63	92	63	88	65	80	73
25....	75	36	74	44	92	60	93	59	86	30	89	51	76	50	92	55	74	52	91	55	92	69	92	65	86	68	81	75
26....	67	42	63	47	86	60	94	64	79	52	83	49	76	51	90	61	68	45	86	59	90	66	92	65	87	68	80	73
27....	69	24	68	24	87	47	92	59	80	37	82	48	73	38	89	52	68	39	88	45	87	69	92	70	88	69	81	75
28....	77	29	67	29	90	51	90	62	77	45	80	37	78	46	85	63	69	52	80	53	87	67	86	68	86	69	82	77
29....	77	36	70	35	91	60	86	69	77	51	83	41	76	51	76	56	75	56	81	57	91	67	94	62	88	70	82	74
30....	80	31	73	35	96	57	94	64	84	44	81	50	80	48	87	58	78	56	90	60	94	71	97	70	92	63	85	73
31....	71	36	78	35	94	65	94	62	76	52	84	52	78	53	90	58	72	53	88	57	95	65	94	69	94	67	90	71
Mns.	71.2	31.1	68.3	33.6	86.7	50.9	86.6	56.6	76.4	39.8	76.0	42.1	74.0	44.2	83.0	52.0	69.3	43.7	82.0	50.1	84.2	61.3	86.6	59.2	84.8	66.3	79.5	70.6

Date.	Texas.																									
	Del Rio.		El Paso.		Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallettsville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	79	54	72	47	90	62	75	47	69	45	78	67	72	61	78	63	74	58	68	50	65	34	75	56	72	36	68	53
2....	67	56	82	52	82	58	76	54	67	51	69	56	61	59	65	55	70	55	58	51	68	41	61	54	71	35	58	53
3....	77	56	85	51	81	59	88	51	74	47	68	56	73	55	69	55	77	47	72	46	76	50	72	55	78	52	70	47
4....	81	64	88	53	86	66	80	55	79	58	73	65	76	63	78	60	78	52	77	55	74	52	76	61	80	52	75	61
5....	81	59	82	61	85	60	78	55	75	58	73	64	79	58	78	62	74	58	74	55	75	46	79	57	80	53	78	60
6....	84	63	82	60	85	62	80	56	78	56	73	65	81	58	78	60	78	50	76	53	78	49	79	56	84	52	77	58
7....	85	63	84	61	86	61	79	57	81	57	75	65	83	55	80	58	79	50	80	53	77	47	80	57	86	52	78	56
8....	85	64	84	62	90	62	82	57	83	58	77	70	84	56	80	60	84	49	79	58	79	47	80	62	87	53	80	58
9....	88	64	89	61	93	66	94	56	85	62	77	71	84	59	82	63	84	57	81	57	88	51	84	61	91	65	82	59
10....	89	68	84	64	95	68	96	60	82	64	79	73	85	62	82	65	85	60	82	63	88	56	84	64	95	60	82	63
11....	83	69	83	56	96	69	85	62	77	64	79	68	90	71	81	65	83	64	70	66	75	44	87	63	85	57	86	62
12....	91	66	87	65	94	75	86	65	84	58	79	69	86	65	81	65	84	62	84	59	83	49	85	62	89	66	84	65
13....	91	73	89	66	95	74	83	65	85	68	79	64	86	68	85	69	86	67	83	69	84	60	83	69	92	61	84	67
14....	87	70	85	64	92	68	81	60	85	63	84	72	90	65	89	64	93	60	86	62	78	60	85	66	88	63	84	64
15....	85	70	85	60	94	69	74	56	92	65	81	75	89	70	90	70	94	62	90	68	69	55	86	63	91	64	89	66
16....	85	68	86	56	94	66	80	56	89	74	81	75	88	69	86	68	92	66	86	66	79	52	87	66	88	61	85	70
17....	85	70	89	62	94	69	82	55	87	71	79	75	86	71	85	67	90	65	86	67	80	51	85	68	92	60	85	67
18....	94	70	88	63	98	70	94	63	87	68	80	75	87	71	85	68	88	65	84	67	89	52	86	67	92	63	82	68
19....	101	70	86	63	97	69	93	63	94	70	81	76	87	73	86	71	88	66	86	70	85	52	88	70	83	61	86	70
20....	89	72	73	58	102	73	89	55	82	60	82	66	77	60	86	62	89	58	81	61	76	46	91	69	85	41	86	62
21....	88	63	77	49	95	66	78	43	81	52	80	66	85	58	80	62	84	52	78	55	71	42	84	61	85	52	82	56
22....	91	54	84	54	90	55	87	55	91	56	83	70	88	59	86	62	88	53	83	59	85	44	86	56	95	45	85	56
23....	92	58	90	60	90	66	88	55	94	64	84	72	89	63	88	64	94	62	88	66	89	42	88	56	98	52	87	58
24....	87	72	91	65	93	72	88	56	92	62	82	74	89	67	89	67	91	68	89	62	86	45	89	66	95	63	87	61
25....	91	72	92	66	93	71	89	64	92	67	82	75	90	71	87	68	89	67	89	70	87	54	88	70	95	63	87	67
26....	93	72	87	68	95	71	94	50	89	69	81	76	91	71	87	71	92	68	84	69	88	55	89	68	95	64	86	69
27....	92	73	88	62	96	73	92	64	90	69	82	74	91	72	87	72	93	68	87	69	88	54	88	71	94	56	88	68
28....	91	74	91	60	95	74	103	59	91	70	82	77	93	72	88	72	92	65	86	68	78	57	91	70	92	62	89	71
29....	94	75	92	66	97	73	103	66	92	71	84	77	93	68	91	73	92	66	90	70	80	51	90	72	89	58	90	71
30....	95	73	95	66	98	70	102	69	96	74	91	74	93	69	94	69	95	65	92	72	87	53	93	70	98	63	95	69
31....	98	71	93	65	100	71	107	61	103	72	93	78	95	68	97	72	96	65	96	73	88	63	96	67	101	62	96	69
Mns.	87.7	66.6	85.9	60.2	92.6	67.4	87.3	57.7	85.4	62.7	79.7	70.6	85.2	64.7	83.8	65.2	86.3	60.3	82.1	62.2	80.4	50.1	84.4	63.6	88.6	56.4	82.9	62.6

a, b, c, etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT NO. 9, COLORADO VALLEY.

FREDERICK H. BRANDENBURG, District Editor.

GENERAL SUMMARY.

May was somewhat warmer than the average in the northern part of the Colorado drainage area, and cooler than the average in the southern part. There were a number of sharp changes in temperature, but in this respect the month did not differ from the average, and in addition the extremes reached were well within the limits common to May. A wide departure from the average was noted, however, in connection with the rainfall. Of the stations reporting only one reported as much as the normal amount, and taken as a whole the average precipitation was less than one-third of the normal. The deficiency was least marked on the drainage of the San Juan, yet at Durango there have been only three drier Mays in 16 years; at Grand Junction, on the Grand, the least precipitation for May in 20 years was recorded. Farther south on the Mimbres, Gila, and the Colorado, proper, there was almost an entire absence of precipitation.

Except for a few short periods low pressure exerted the controlling influence on weather conditions. As usual with the advance of the season toward midsummer there is a tendency of the nearly permanent southwestern low pressure in the vicinity of the Gulf of California to spread northward. It is not likely that this movement was any stronger during May, 1911, than usual. The persistency of low pressure, generally ill-defined and of a shifting character, without precipitation, is probably to be accounted for by the small number of high-pressure areas of sufficient strength to move inland from the Pacific.

TEMPERATURE.

The mean of the 141 stations reporting was 60.2°, or 0.3° below the normal. By subdivisions the means and departures were: Western Wyoming, 47.7°, +1.3°; western Colorado, 50.8°, +0.7°; eastern Utah, 56.6°, +0.4°; western New Mexico, 60.1°, +0.4°; Arizona, 67.2°, −1.1°; and southeastern Nevada, 63.3°. The highest and lowest monthly means, 81.8° and 30.6°, were as usual at Mokawk Summit, Ariz., and Corono, Colo., respectively. After the first day of the month, which was cool, there was about a week with temperatures above the normal, the excess being marked in western Colorado. During the rest of the month cool weather predominated with an occasional warm day here and there. Of the cool periods the 15th and 16th, 26th–28th throughout the district, and the 19th and 20th in western Colorado were the most notable. By subdivisions the extremes were: Western Wyoming, 86° at Green River and 12° at Battle Mountain; western Colorado, 90° at Delta and 9° near Silverton; eastern Utah, 94° at Springdale and 13° at Scofield; western New Mexico, 100° at Columbus and 18° at Luna; Arizona, 109° at Gilabend and 15° at Flagstaff No. 2; southeastern Nevada, 97° at Logan and 33° at Caliente.

Frosts were frequent in all parts of the district, except southern New Mexico and southern Arizona. In Wyoming hard freezing weather was general. In parts of the lower Grand Valley the temperature was slightly below the freezing point on the night of the 10th–11th. Apples dropped badly, probably on account of the cold. In southwestern Colorado freezing temperatures occurred on the 16th. In localities fruit was killed, in others but little harm was done. In Montrose and Delta Counties considerable damage was done by frost on the 20th and 21st. In Utah the minimum temperature of the month was below the freezing point at three-fourths of the stations, principally on the 11th. No reports have been received as to the extent of the damage. In northwestern New Mexico hard freezing weather occurred on the 11th. Frosts also occurred on the 16th, 20th, 21st, and 27th in the San Juan and upper Gila Valleys, damaging fruit, gardens, and corn.

PRECIPITATION.

The average for the 189 stations reporting was 0.19 inch, or 0.47 inch below the normal. The average for May, 1910, was 0.38 inch. By subdivisions the means and departures were: Green, 0.31, −0.88; Grand, 0.45, −0.94; San Juan, 0.44, −0.67; Little Colorado, 0.01, −0.56; Gila, 0.03, −0.21; Mimbres, trace, −0.17; and Colorado, proper, 0.08, −0.43 inch. The greatest monthly amount was 2.14 inches at Corona, Colo., while there was none at 1 station in western Colorado, 10 in eastern Utah, 9 in western New Mexico, 1 in southeastern Nevada, and 55 in Arizona. The average number of days with 0.01 inch or more of precipitation was 3 in western Wyoming, 4 in western Colorado, 1 in eastern Utah, 1 in western New Mexico, 1 in southeastern Nevada, and 0 in Arizona, and for the district as a whole 2 days.

MISCELLANEOUS.

The sunshine was above the average. Grand Junction reported 76, Durango 78, Phoenix 94, and Flagstaff and Yuma 97 per cent of the possible.

The mean relative humidity was lower than the average, especially in northern Arizona. The following values were reported: Grand Junction 45, Durango 42, Flagstaff 32, Phoenix 33, and Yuma 34 per cent.

NOTES.

Bloomfield, N. Mex.—May was very dry and windy. Frost caused much damage to all crops. The range is good.

Fruitland, N. Mex.—May will go on record as a phenomenal month. Fruit is gone; hay, corn, and wheat were frozen some, but all crops are growing now.

Luna, N. Mex.—May was very dry and cold. Irrigation water is scarce.

THE COLORADO RIVER.

For May the volume discharged by the Green River at Elgin, Utah, was about the average; that of the Grand at Fruita, Colo., was appreciably higher than the average, and it is probable that the San Juan was fully up to the average; data for previous Mays, however, are not available for comparison. After the first four days, during which period the Green, the Grand, and the San Juan fell slowly, these rivers that form the Colorado rose steadily, the San Juan reaching the highest stage of the month on the 10th, the Grand on the 11th, and the Green on the 13th. High stages continued during the rest of the month. In the Colorado, proper, at Grand Canyon, Ariz., the maximum stage, 48 feet, occurred on the 13th, and the lowest, 35 feet, on the 20th and 21st. At Topock, Ariz., near Needles, Cal., there was a slight crest on the 4th and 5th, followed by a decline. Beginning with the 9th there was a steady rise, culminating on the 15th and 16th with a gauge height of 15 feet. At Yuma the lowest stage occurred on the 1st, and the highest on the 19th and 20th, the range being 3.9 feet.

FOREST FIRES IN ARIZONA.

Forest fires broke out in the northern section of the Garces National Forest early in May. Three troops of soldiers were ordered from Fort Huachuca to assist the forest rangers in fighting the fire, which spread over a large area to Garden Canyon, on the Military Reservation. Another fire was discovered near Rainsey Canyon, covering an area of 5 miles in length and about three-fourths of a mile in width. Owing to the high southwest winds then prevailing the fires were checked with great difficulty during the first four days; but after the winds decreased in force the fires were extinguished without great effort.

TABLE 1.—*Climatological data for May, 1911. District No. 9, Colorado Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Battle Mountain	Carbon	7,300	...	48.6[k]	.....	77	31	12	1	51[k]	.....	.....	.....	.....	...	5[k]	14[k]	1[k]	w.	U. S. Forest Service.
Daniel	Uinta	6,740	12	44.0	+ 1.3	78	5	16	11	50	0.82	— 0.46	0.50	4.0	2	12	19	0	nw.	J. M. Van Dervort.
Eden	Sweetwater	6,577	2	48.7	.....	81	31	17	11†	51	0.17	.....	0.04	0.6	6	15	10	6	w.	Eden Valley L. & I. Co.
Green River	....do	6,083	6	51.5	.....	86	4	21	11	51	0.05	.....	0.04	0	2	12	14	5	w.	Geo. W. Maxom.
Pinedale	Fremont	7,167	5	45.8[c]	.....	79	31	15	10	54[c]	0.02	.....	0.02	0	1	14[c]	9[c]	5[c]	nw.[c]	U. S. Forest Service.
Willow Creek Cabin	....do	7,500	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Do.
Colorado.																				
Ashcroft	Pitkin	9,483	9	44.2	.....	71	30	15	11†	43	1.84	.....	0.65	9.0	14	.....	.....	.....	.....	Dan McArthur.
Breckenridge	Summit	9,536	22	40.9	+ 2.0	68	25	13	11†	42	1.02	— 1.10	0.58	T.	4	0	27	4	sw.	Mrs. J. G. Thompson.
Buford	Rio Blanca	.....	...	.....	.....	.....	.....	.....	.....	.....	0.21	.....	0.15	0	2	23	8	0	w.	Mrs. H. Genier.
Cascade	San Juan	8,900	4	.....	.....	.....	.....	.....	.....	.....	1.32	.....	0.49	0	9	20	1	10	.....	San Juan W. & P. Co.
Cedaredge	Delta	6,175	13	56.8	+ 0.7	81	31	29	11†	41	0.00	— 0.91	0.00	0	0	9	21	1	.....	Harry A. Cobbett.
Chromo	Archuleta	7,500	5	50.2	.....	81	13†	17	11†	54	0.78	.....	0.50	0	3	17	4	10	sw.	Lawrence Nolan.
Cochetopa	Saguache	9,088	2	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.15	0	5	8	22	1	w.	Miss Bessie McDonough.
Collbran	Mesa	6,000	18	55.1	+ 1.7	80	31	27	11	38	0.01	— 1.48	0.01	0	1	9	20	2	sw.	A. A. Wood.
Columbine	Routt	8,766	1	.....	.....	.....	.....	.....	.....	.....	1.26	.....	0.30	T.	8	3	25	3	sw.	Mrs. M. A. Caron.
Columbine Ranch	Delta	6,925	1	.....	.....	.....	.....	.....	.....	.....	0.37	.....	0.20	0	2	17	10	4	s.	Geo. W. Wade.
Corona	Grand	11,660	4	30.6	.....	50	25†	10	19†	30	2.14	.....	0.98	16.5	6	.....	.....	.....	w.	U. S. Weather Bureau.
Cortez	Montezuma	6,100	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Wm. C. Syrett.
Craig	Routt	.....	...	51.5[f]	.....	85	31	20	20	55[f]	0.39	.....	0.36	0	3	.....	.....	.....	.....	Joseph F. Haubrich.
Crawford (near)	Montrose	6,600	1	54.2	.....	79	31	28	11†	36	0.30	.....	0.18	T.	4	23	4	4	.....	C. W. Roe.
Crested Butte	Gunnison	8,867	1	42.9	.....	70	30	13	11	44	1.47	.....	0.50	0	7	11	15	5	w.	Charles L. Ross.
Delta	Delta	4,965	21	59.8	+ 0.8	90	31	27	11	53	T.	— 0.66	T.	0	0	18	10	3	.....	E. M. Getts.
Dillon	Summit	8,800	1	43.6	.....	70	25†	15	1†	49	0.33	.....	0.21	4.0	2	15	11	5	n.	Harry T. Hamilton.
Durango	La Plata	6,534	16	53.8	— 1.2	77	30	26	11	41	0.59	— 0.55	0.46	0	5	12	14	5	nw.	U. S. Weather Bureau.
Eureka	San Juan	10,000	4	.....	.....	.....	.....	.....	.....	.....	0.91	.....	0.33	0	5	18	8	5	.....	San Juan W. & P. Co.
Fraser	Grand	8,560	2	41.0	.....	68	5†	10	11	51	0.30	.....	0.10	2.0	5	11	9	11	w.	L. D. C. Gaskill.
Fruita	Mesa	4,510	12	59.8	+ 1.0	89	31	28	11†	50	0.09	— 0.93	0.09	T.	1	14	14	3	sw.	J. B. Willsea.
Gladstone	San Juan	10,400	4	.....	.....	.....	.....	.....	.....	.....	0.94	.....	0.30	2.2	9	0	25	6	ne.	San Juan W. & P. Co.
GlenwoodSprings(near)	Garfield	5,823	13	52.8	— 1.1	85	31	19	11	51	T.	— 1.00	T.	0	0	25	3	3	w.	E. A. O'Neil.
Grand Junction	Mesa	4,608	20	63.0	+ 1.4	88	31	37	20	38	0.03	— 0.89	0.03	0	1	12	18	1	se.	U. S. Weather Bureau.
Grandlake	Grand	8,153	3	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	T.	0	18	13	0	w.	Mrs. Belle Kauffman.
Grand Valley	Garfield	5,089	19	56.8	— 0.5	86	5	24	11	53[a]	T.	— 1.20	T.	0	0	11[a]	13[a]	6[a]	.....	David Evans.
Gunnison	Gunnison	7,670	18	46.6[f]	— 1.3	77	7	14[m]	11	57[f]	0.28	— 0.40	0.15	1.0	2	25	6	0	sw.	Clarence Adams.
Horsefly	Montrose	8,700	1	.....	.....	.....	.....	.....	.....	.....	0.12	.....	0.12	T.	1	16	13	2	sw.	Lawrence J. Finch.
Ironton	Ouray	10,000	1	.....	.....	.....	.....	.....	.....	.....	1.76	.....	0.48	5.2	12	4	22	5	sw.	P. H. Foley.
Lake City	Hinsdale	8,686	6	46.8	.....	70	5†	19	11†	44	0.72	.....	0.22	1.9	7	16	11	4	s.	J. F. Maurer.
Lay	Routt	6,190	17	50.2	+ 0.3	82	31	20	11	52	0.40	— 0.90	0.24	T.	3	8	10	13	sw.	A. G. Wallihan.
Mancos	Montezuma	6,960	12	53.8	+ 2.7	80	30	22	20	47	T.	— 1.38	T.	0	0	8	21	2	sw.	B. M. Krumpanitzky.
Marble	Gunnison	7,951	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	F. E. Morse.
Marshall Pass	Saguache	10,846	8	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	T.	0	14	16	1	w.	Wm. D. Lillard.
Meeker (near)	Rio Blanca	6,182	19	51.0	— 0.5	83	5	22	11†	52	0.25	— 1.18	0.22	3.0	2	12	16	3	sw.	T. Baker.
Montrose	Montrose	5,811	22	58.0	+ 3.5	84	31	28	11†	44	0.04	— 0.70	0.04	0	1	15	14	2	.....	U. S. Reclamation Service.
Nast	Pitkin	7,953	1	45.4	.....	72	31	21	11	40	0.32	.....	0.32	T.	1	14	13	4	w.	Arthur Hanthorn.
Pagoda	Routt	6,500	20	51.0	+ 0.3	82	31	21	29	49	0.03	— 1.41	0.02	0	2	18	0	13	.....	Mrs. J. W. Scott.
Pagosa Springs	Archuleta	7,108	4	49.4	.....	80	30	15	11†	55	0.29	.....	0.10	0.2	4	15	12	4	sw.	E. T. Walker.
Palisades	Mesa	4,729	...	63.3	.....	87	31	35	20	39	0.02	.....	0.02	0	1	15	11	5	sw.	G. L. Herbolsheimer.
Paonia	Delta	5,694	16	58.2	+ 1.6	85	5	28	20	44	0.12	— 1.26	0.07	T.	3	8	21	2	sw.	J. M. Underwood.
Parshall	Grand	.....	2	.....	.....	.....	.....	.....	.....	.....	0.38	.....	0.25	0	3	.....	.....	.....	.....	F. A. Field.
Pitkin	Gunnison	9,500	2	.....	.....	.....	.....	.....	.....	.....	1.54	.....	0.40	1.0	9	5	17	9	s.	Mrs. Maggie Camman.
Pyramid	Rio Blanca	.....	...	48.6	.....	74	5†	19	11	43	1.48	.....	0.70	4.4	4	6	24	1	w.	A. C. Egry.
Rangely	....do	5,050	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Mrs. C. P. Hill.
Redcliff	Eagle	8,695	18	.....	.....	.....	.....	.....	.....	.....	0.93	— 0.35	0.40	13.0	4	15	8	8	.....	Dorothea Greiner.
Rico	Dolores	8,824	9	.....	.....	.....	.....	.....	.....	.....	0.36	.....	0.15	0	5	26	3	2	s.	Clinton B. Smith.
River Portal	Montrose	6,570	5	54.8	.....	82	30	24	11	49	0.17	.....	0.08	T.	4	15	4	12	.....	U. S. Reclamation Service.
Sapinero (near)	Gunnsion	8,125	8	46.4	.....	72	5	18	11	40	0.38	.....	0.21	2.9	5	17	9	5	w.	W. F. Irving.
Shoshone	Garfield	6,110	1	56.2	.....	79	5	30	11	36	0.36	.....	0.12	0	5	21	5	5	.....	Central Colo. Pow. Co.
Silverton (near)	San Juan	9,400	4	42.0	.....	66	7	9	8	50	1.10	.....	0.28	T.	9	7	16	8	sw.	San Juan W. & P. Co.
Spruce Lodge	Grand	9,600	3	.....	.....	.....	.....	.....	.....	.....	1.19	.....	0.50	2.0	9	.....	.....	.....	.....	H. J. Wills.
Steamboat Springs	Routt	6,683	8	48.6	.....	79	31	17	11	52	0.65	.....	0.26	4.0	3	27	1	3	.....	M. Elliot Houston.
Tacoma	La Plata	7,300	4	.....	.....	.....	.....	.....	.....	.....	0.57	.....	0.34	T.	3	12	9	10	sw.	San Juan W. & P. Co.
Terminal Dam	....do	8,300	4	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.08	0	5	13	17	1	s.	Do.
Terrill's Ranch	Mesa	7,000	...	.....	.....	.....	.....	.....	.....	.....	0.09	.....	0.08	0	2	11	19	1	sw.	A. F. Terrill.
Uncompahgre Plateau	Montrose	8,400	1	.....	.....	.....	.....	.....	.....	.....	0.12	.....	0.12	0	1	13	18	0	sw.	Martin Esser.
Yampa (near)	Routt	8,000	2	.....	.....	.....	.....	.....	.....	.....	0.20	.....	0.14	0	3	7	17	7	sw.	Percy A. Hughes.
Utah.																				
Aneth	San Juan	4,800	8	63.0	.....	91	30	31	11	46	0.00	.....	0.00	0	0	19	12	0	sw.-s.	H. R. Antes.
Castle Dale	Emery	5,500	12	55.3	+ 2.3	82	5†	25	11	47	0.00	— 0.52	0.00	0	0	22	9	0	.....	James Jeffs.
Dragon	Uinta	.....	0	54.4	.....	80	5†	24	11	44	0.27	.....	0.12	1.9	5	.....	.....	.....	s.	Gilson Asphaltum Co.
Duchesne	Wasatch	5,507	5	52.8	.....	82	5	24	20	48	T.	.....	T.	0	0	7	18	6	s.	M. M. Smith.
Elkhorn	Uinta	6,657	1	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	14	17	0	s.	U. S. Forest Service.
Emery	Emery	6,200	10	53.6	+ 2.6	79	5	30	1†	45	0.00	— 0.57	0.00	0	0	5	3	23	n.	H. C. Wickman.
Escalante	Garfield	5,700	10	55.2	— 0.1	84	4	26	15	44	0.02	— 0.63	0.02	0	1	26	0	5	.....	Geo. H. Barney.
Fort Duchesne	Uinta	5,000	21	56.8	+ 0.7	87	31	25	11	50	0.00	— 0.82	0.00	0	0	23	4	4	w.	Post Surgeon.
Fruitland	Wasatch	7,625	1	49.0	.....	79	23	18	11	48	0.01	.....	0.01	T.	1	13	16	2	w.	J. Peter Naab.
Grayson	San Juan	5,750	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Joseph A. Lyman.
Green River	Emery	4,080	10	63.9	+ 0.1	92	5	31	11	51	0.00	— 0.63	0.00	0	0	14	16	1	sw.	Edgar E. Adams.
Hanksville	Wayne	4,200	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	F. J. Weber.
Hite	Garfield	3,000	10	68.4	.....	92	5†	44	11	42	0.00	.....	0.00	0	0	27[a]	3[a]	0[a]	w.	John P. Hite.
Kanab	Kane	4,925	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	W. J. F. McAllister.
La Sal	San Juan	7,000	10	54.6	+ 3.8	76	31	26	20	37	T.	— 1.45	T.	T.	0	14	12	5	.....	Gertrude W. Carpenter.
Loa	Wayne	7,000	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	Frank E. Brown.
Manila	Uinta	6,225	1	.....	.....	.....	.....	.....	.....	.....	0.28	.....	0.17	0	4	6	19	6	s.	Daniel M. Nelson.
Mexican Hat	San Juan	.....	0	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	...	.....	.....	.....	.....	G. D. James.
Moab	Grand	4,000	22	65.1	+ 1.1	92	5†	33	11	49	T.	— 0.83	T.	0	0	9	18	4	.....	Henry Crouse.
Monticello	San Juan	7,545	2	53.5	.....	75	7†	29	10†	33	0.00	.....	0.00	0	0	23[a]	6[a]	1[a]	sw.	Geo. F. Barton.
Orderville	Kane	6,660	1	.....	.....	.....	.....	.....	.....	.....	0.24	.....	0.16	0	2	.....	.....	.....	.....	F. A. Porter.
Pine Valley	Washington	.....	0	.....	.....	.....	.....	.....	.....	.....	0.40	.....	0.40	0	1	25	3	3	se.	Mason Gardner.
Price	Carbon	5,557	0	57.1	.....	85	5†	29	11	45	0.00	.....	0.00	0	0	25	3	3	se.	R. H. Thompson.
Ranch	Kane	6,700	9	47.2	.....	78	7	24	2†	45	0.24	.....	0.12	0	3	24	5	2	w.	J. W. Seaman.
St. George	Washington	2,880	21	64.4	— 2.3	93	22	34	11†	52	T.	— 0.40	T.	0	0	13	15	3	.....	A. B. Ballantyne.
Scofield	Carbon	7,625	1	46.0	.....	77	5	13	11	52	0.66	.....	0.60	1.0	2	16	0	15	s.	Geo. A. Murphy.
Springdale	Washington	3,500	3	64.8	.....	94	22	39	1	47	0.25	.....	0.25	0	1	23	0	8	s.	Alberta Flanigan.

TABLE 1.—*Climatological data for May, 1911. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Utah—Continued.																				
Sunnyside	Carbon	5,280	6	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.60	11.0	2	.....	.....	.....	.....	Henry Cullum.
Teasdale	Wayne	7,000	3	51.6°	.....	74	22†	21	10	33	0.02	.....	0.01	0	2	16°	0°	12°	sw.	Josiah Shurtz.
Thompsons	Grand	5,150	0	60.6	.....	83	5	36	20	36	T.	.....	T.	T.	0	15	13	3	sw.	A. M. Starmont.
Tropic	Garfield	7,000	13	52.6	+ 0.9	80	4	27	11	48	T.	− 0.83	T.	0	0	14	15	2	nw.	E. P. Bolton.
Trout Creek Ranger	Uinta	9,200	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Vernal	do	5,050	15	52.1	− 4.7	85	5	24	11	50	T.	− 1.12	T.	0	0	19	10	2	.....	S. P. Trim.
Woodside	Emery	4,645	0	59.2	.....	87	5	27	20	50	0.00	.....	0.00	0	0	.....	.....	.....	s.	D. P. Adams.
New Mexico.																				
Alma	Socorro	5,500	15	61.2	− 0.8	95	30	25	3†	61	0.40	+ 0.06	0.40	0	1	12	17	2	s.	M. A. Balke.
Aragon	do	5,856	4	52.0	.....	82	30	19	2†	59	T.	.....	T.	0	0	21	10	0	sw.	John R. Milligan.
Aztec	San Juan	5,590	...	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0	0	19	11	1	.....	Dr. T. J. West.
Blackrock	McKinley	6,500	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. J. Bauman.
Bloomfield	San Juan	5,500	16	60.6	+ 2.4	92	5	24	11	54	0.02	− 0.49	0.02	0	1	17	14	0	sw.	Fred LeClerc.
Cambray	Luna	4,215	12	.....	.....	96	24†	.....	.....	.....	0.00	− 0.11	0.00	0	0	24	4	3	w.	Agent, So. Pac. R. R.
Cliff	Grant	4,470	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. C. Belden.
Columbus	Luna	4,054	2	.....	.....	100	31	.....	.....	.....	0.00	.....	0.00	0	0	21	10	0	sw.	Agent, E. P. & S.W. R. R.
Deming	do	4,333	34	65.8	.....	95	30	35	3†	52	0.00	− 0.18	0.00	0	0	25	6	0	w.	Agent, So. Pac. R. R.
Dulce	Rio Arriba	6,756	4	52.4	+ 1.2	80	30	20	11	51	0.45	− 0.57	0.18	0	4	16	2	13	w.	G. H. Blakeslee.
Fort Bayard	Grant	6,152	36	62.4	+ 0.7	89	31	35	1†	44	T.	− 0.28	T.	0	0	28	2	1	w.	U. S. General Hospital.
Fort Wingate	McKinley	6,997	47	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Medical Corps, U. S. A.
Fruitland	San Juan	4,800	18	60.8	+ 0.8	92	30	24	11	58	T.	− 0.37	T.	0	0	21	10	0	sw.	C. J. Collyer.
Gage	Luna	4,486	4	67.4	.....	98	31	38	1	50	0.00	− 0.12	0.00	0	0	29	2	0	w.	Agent, So. Pac. R. R.
Gila planting station	Grant	6,475	....	61.4	.....	84	30	35	21	40	T.	.....	T.	0	0	25	6	0	sw.	U. S. Forest Service.
Hachita	do	4,505	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0	0	20	9	2	w.	Agent, E. P. & S. W. R. R.
Haynes	Rio Arriba	6,600	1	.....	.....	.....	.....	.....	.....	.....	0.26	.....	0.25	0	2	27	3	1	nw.	Dr. John R. Haynes.
Hermanes	Luna	4,451	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	25	2	4	w.	Agent, E. P. & S. W. R. R.
Lordsburg	Grant	4,245	11	67.6	− 1.6	95	31	37	2	50	0.00	− 0.21	0.00	0	0	15	15	1	sw.	Agent, So. Pac. R. R.
Luna	Socorro	7,300	6	50.0	.....	77	17	18	2	55	0.00	.....	0.00	0	0	20	11	0	w.	C. B. Martin.
Mimbres	Grant	5,007	6	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	22	9	0	se.	Charles Dennis.
Pinos Altos	do	8,000	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. L. Scott.
Pratt	do	4,415	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	27	4	0	sw.	Agent, E. P. & S. W. R. R.
Putnam	San Juan	6,200	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. Lee Thompson.
Redrock	Grant	4,150	6	.....	.....	.....	.....	.....	.....	.....	0.34	.....	0.34	0	1	21	7	3	.....	Robt. H. Woods.
Rodeo	do	4,118	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0	0	30	1	0	.....	Agent, E. P. & S. W. R. R.
Arizona.																				
Allaire's ranch	Cochise	4,184	14	.....	.....	.....	.....	.....	.....	.....	T.	− 0.14	T.	0	0	21	3	7	sw.	Thos. Allaire.
Alpine	Apache	7,500	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Aztec	Yuma	492	13	75.2	− 5.0	103	22	47	16	48	0.00	− 0.25	0.00	0	0	31	0	0	w.	Agent, Southern Pacific Co.
Benson	Cochise	3,523	29	68.2	− 6.7	98	31	37	22	55	0.00	− 0.12	0.00	0	0	26	4	1	e.	Do.
Bisbee	do	5,500	22	65.6	− 0.3	86	31	46	1†	32	0.02	− 0.23	0.02	0	1	18	9	4	e.	Rev. J. G. Pritchard.
Bonita	Graham	4,916	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Ross.
Bowie	Cochise	3,756	35	72.3	+ 1.0	99	23	45	16	42	0.00	− 0.22	0.00	0	0	27	4	0	sw.	Agent, Southern Pacific Co.
Buckeye	Maricopa	980	20	71.8	− 0.6	100	22†	43	1†	50	0.00	− 0.07	0.00	0	0	28	3	0	sw.	H. E. Kell.
Camp Verde	Yavapai	3,160	23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. B. Gabbard.
Canille	Santa Cruz	5,225	2	.....	.....	.....	.....	.....	.....	.....	0.02	.....	0.02	0	1	18	12	1	sw.	R. A. Rodgers.
Casa Grande	Pinal	1,396	30	80.2	+ 1.0	103	23	50	16	50	0.00	− 0.05	0.00	0	0	26	5	0	sw.	Agent, Southern Pacific Co.
Casa Grande Ruins	do	1,422	3	72.0	.....	101	23	40	16	54	0.00	.....	0.00	0	0	22	7	2	w.	F. Pinkley.
Cavecreek	Maricopa	1,520	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. A. Howard.
Chin Lee	Apache	6,090	3	58.5	.....	85	5†	24	11	53	0.01	.....	0.01	0	1	20	8	3	sw.	Fr. L. Ostermann, O. F. M.
Chlarsons Mill	Graham	8,000	5	53.8	.....	76	4†	26	11	46	0.00	.....	0.00	0	0	26	5	0	.....	H. R. Chlarson.
Clifton	Greenlee	3,584	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. Reisinger.
Cline	Gila	2,300	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. M. Clanton.
Cochise	Cochise	4,219	13	74.7	+ 3.2	98	23	50	1	32	0.00	− 0.17	0.00	0	0	31	0	0	.....	Agent, Southern Pacific Co.
Columbia	Yavapai	1,900	9	75.4	.....	95	4†	50	14	34	0.00	.....	0.00	0	0	29	2	0	se.	M. J. Nolan.
Congress	do	3,688	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Assayer, Congress Mine.
Courtland	Cochise	4,543	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	27	4	0	sw.	Agent, E. P. & S. W. Co.
Dos Cabezos	do	5,250	3	64.8	.....	96	29†	31	1	56	0.10	.....	0.10	0	1	23	7	1	w.	N. Erickson.
Douglas	do	3,930	8	69.0	.....	97	31	37	2	53	0.00	.....	0.00	0	0	25	5	1	sw.	Dr. F. T. Wright.
Dudleyville	Pinal	2,204	20	67.6	− 2.2	93	7†	39	16	48	0.00	− 0.38	0.00	0	0	19	9	3	sw.	G. F. Cook.
Fairbank	Cochise	3,862	2	.....	.....	.....	.....	.....	.....	.....	0.12	.....	0.10	0	2	20	7	4	.....	Agent, E. P. & S. W. Co.
Flagstaff	Coconino	6,907	20	49.5	− 1.2	74	22	22	11	46	0.08	− 1.13	0.08	T.	1	24	7	0	sw.	U. S. Weather Bureau.
Flagstaff (1)	do	7,452	6	47.0	.....	75	8	19	11†	46	0.09	.....	0.09	0	1	28	3	0	.....	C. C. Moers.
Flagstaff (2)	do	7,500	2	45.7	.....	72	4†	15	11†	53	T.	.....	T.	0	0	24	7	0	sw.	U. S. Forest Service.
Florence	Pinal	1,504	12	71.8	− 3.0	102	23	39	16	54	0.00	− 0.04	0.00	0	0	20	4	7	e.	Agent, Ariz. Eastern R. R. Co.
Fort Apache	Navajo	5,200	40	57.9	− 2.5	86	31	30	16	46	0.00	− 0.59	0.00	0	0	25	5	1	sw.	Post Surgeon, U. S. A.
Fort Huachuca	Cochise	5,100	25	69.0	+ 1.6	91	29†	48	1†	40	T.	− 0.27	T.	0	0	27	0	4	se.	Do.
Fort Mohave	Mohave	604	43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. F. Duclos.
Gilabend	Maricopa	737	21	76.0	− 2.8	109	23	48	12†	52	0.00	− 0.04	0.00	0	0	30	1	0	.....	Agent, Southern Pacific Co.
Globe	Gila	3,525	11	67.5	.....	92	4†	40	16	44	0.00	− 0.30	0.00	0	0	21	10	0	sw.	B. G. Fox, M. D.
Grand Canyon	Coconino	6,866	5	51.2	.....	79	7	23	16	47	0.14	.....	0.14	0	1	25	6	0	sw.	Agent, G. C. R. R. Co.
Grand Canyon (1)	do	3,676	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. C. Spaulding.
Granite Reef Dam	Maricopa	1,372	18	73.2	− 1.5	99	23	45	16	46	0.00	− 0.15	0.00	0	0	23	8	0	w.	U. S. Reclamation Service.
Greer	Apache	9,200	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. M. Butler.
Heber	Navajo	6,633	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. S. Perkins.
Hereford	Cochise	4,180	2	.....	.....	.....	.....	.....	.....	.....	0.25	.....	0.25	0	1	21	7	3	sw.	Agent, E. P. & S. W. Co.
Holbrook	Navajo	5,069	21	59.2	− 1.6	89	4	30	11†	50	0.00	− 0.27	0.00	0	0	31	0	0	.....	T. Larson.
Indian Oasis	Pima	3,000	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Menager.
Intake	Gila	2,230	4	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	30	1	0	w.	U. S. Reclamation Service.
Jerome	Yavapai	4,743	14	65.4	0.0	86	22	43	15	31	0.06	− 0.47	0.06	0	1	25	6	0	w.	Dr. L. A. Hawkins.
Keams Canyon	Navajo	6,600	8	57.3	.....	81	30	27	16	48	0.00	.....	0.00	0	0	27	4	0	w.	D. E. Livesay.
Kingman	Mohave	3,326	8	64.6	.....	93	22	33	16	50	0.31	.....	0.31	0	1	25	5	1	sw.	G. R. Gooding.
Lewis Springs	Cochise	4,029	2	.....	.....	.....	.....	.....	.....	.....	0.10	.....	0.10	0	1	11	19	1	se.	Agent, E. P. & S. W. Co.
Maricopa	Pinal	1,186	34	83.4	+ 3.4	107	22	62	20	40	0.00	− 0.05	0.00	0	0	28	3	0	sw.	Agent, Southern Pacific Co.
McNeal	Cochise	4,490	...	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0	0	23	5	3	sw.	C. E. Bolton.
Mesa	Maricopa	1,244	16	71.6	− 2.9	97	22	45	14†	45	0.00	− 0.06	0.00	0	0	27	4	0	sw.	C. L. Diehl.
Mohawk Summit	Yuma	538	11	81.8	− 0.1	108	22	58	2	41	0.00	− 0.03	0.00	0	0	30	0	1	w.	Agent, Southern Pacific Co.
Naco	Cochise	4,579	2	.....	.....	.....	.....	.....	.....	.....	0.13	.....	0.13	0	1	26	5	0	w.	Agent, E. P. & S. W. Co.
Natural Bridge	Gila	4,990	22	.....	.....	.....	.....	.....	.....	.....	0.00	− 0.52	0.00	0	0	25	6	0	sw.	D. G. Goodfellow.
Oracle	Pinal	4,500	18	68.3	− 0.1	87	23	47	1†	34	0.00	− 0.36	0.00	0	0	24	6	1	sw.	W. H. Winters.
Osborn	Cochise	4,676	2	.....	.....	.....	.....	.....	.....	.....	0.02	.....	0.02	0	1	18	11	2	w.	Agent, E. P. & S. W. Co.
Paradise	do	3,940	5	61.6	.....	89	23	31	16†	52	T.	.....	T.	0	0	18	11	2	sw.	J. C. Hancock.

TABLE 1.—*Climatological data for May, 1911. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days	Number of partly cloudy days.	Number of cloudy days.		
Arizona—Continued.																				
Parker	Yuma	345	17	72.6	− 3.8	102	5†	42	1†	56	0.00	− 0.14	0.00	0	0	28	3	0	.....	M. A. Israel, M. D.
Payson	Gila	5,550	3	56.8	.....	83	4†	27	16	51	0.00	.....	0.00	0	0	26	5	0	sw.	M. McDonald.
Phoenix	Maricopa	1,108	16	74.1	− 0.7	99	23	49	16	40	0.00	− 0.03	0.00	0	0	23	8	0	e.	U. S. Weather Bureau.
Phoenix (1)	....do	1,092	22	72.0	− 1.8	100	22†	42	1†	50	0.00	− 0.06	0.00	0	0	23	7	1	w.	G. Acuff.
Phoenix (2)	....do	1,189	3	75.8	.....	101	23	45	16†	50	0.00	.....	0.00	0	0	27	2	2	sw.	Horne & Armstrong.
Pinal Ranch	Pinal	4,520	17	.....	.....	.....	.....	.....	.....	.....	0.00	− 0.32	0.00	0	0	27	4	0	.....	Irion & Craig.
Pinto	Apache	5,660	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. C. F. Henning.
Prescott	Yavapai	5,320	45	53.8	− 4.9	80	4†	27	30	49	T.	− 0.51	T.	0	0	30	1	0	.....	J. W. Flinn, M. D.
Quartzite	Yuma	800	4	74.6	.....	102	21	45	12	53	0.00	.....	0.00	0	0	30	1	0	w.	W. E. Scott.
Redrock	Pinal	1,864	3	76.6	.....	102	8†	48	1	48	0.00	.....	0.00	0	0	15	16	0	sw.	W. J. Crowell.
Roosevelt	Gila	2,175	6	72.4	.....	96	23	43	14	50	0.00	.....	0.00	0	0	28	3	0	.....	U. S. Reclamation Service.
Saccaton	Pinal	1,280	4	73.2	.....	101	22†	43	16	51	0.00	.....	0.00	0	0	26	5	0	.....	E. W. Hudson.
St. Johns	Apache	5,650	8	60.0	.....	89	31	25	11	57	T.	.....	T.	0	0	18	10	3	sw.	A. Shreeve.
St. Michaels	....do	6,950	23	56.8	+ 3.4	81	31	26	16	48	T.	− 0.63	T.	0	0	23	4	4	sw.	Rev. A. Weber, O. F. M.
Salome	Yuma	1,875	4	64.8	.....	95	22	35	9†	48	0.00	.....	0.00	0	0	24	6	1	s.	Mrs. M. B. Swartz.
San Carlos	Gila	2,456	29	71.0	+ 0.7	98	8†	40	15	49	0.00	− 0.26	0.00	0	0	20	9	2	w.	F. S. Thomas.
San Simon	Cochise	3,609	25	71.9	− 4.4	98	23	44	16	42	0.00	− 0.15	0.00	0	0	28	3	0	sw.	Agent, Southern Pacific Co.
Seligman	Yavapai	5,219	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Lib., A., T & S. F. Ry. Co.
Sentinel	Maricopa	685	13	76.6	− 2.4	103	22	48	16	46	0.00	− T.	0.00	0	0	26	5	0	w.	Agent, Southern Pacific Co.
Showlow	Navajo	6,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Z. Hall.
Silverbell	Pima	2,650	6	76.3	.....	97	7	50	15	37	0.00	.....	0.00	0	0	23	4	4	w.	Imperial Copper Co.
Snowflake	Navajo	5,644	4	56.1	.....	85	5	24	11	55	0.00	.....	0.00	0	0	19	11	1	sw.	W. J. Flake.
Springerville	Apache	6,862	.....	55.7	.....	82	8	24	16	55	0.00	.....	0.00	0	0	26	5	0	sw.	U. S. Forest Service.
Supai	Coconino	3,200	5	70.7	.....	94	4†	42	1†	45	0.00	.....	0.00	0	0	27	4	0	s.	A. H. Symons.
Tempe	Maricopa	1,165	7	71.8	.....	102	23	41	16	55	0.00	.....	0.00	0	0	23	7	1	sw.	F. H. Simmons.
Thatcher	Graham	2,800	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Prof. J. H. Larson.
Tombstone	Cochise	4,550	15	70.4	− 2.5	96	31	46	1†	43	0.10	− 0.14	0.10	0	1	20	10	1	.....	F. N. Walcott.
Truxton	Mohave	3,997	2	61.0	.....	89	22	35	16	46	T.	.....	T.	0	0	27	3	1	s.	G. A. Dennis.
Tuba	Coconino	4,500	11	60.0	− 1.7	85	5†	34	20	49	0.00	− 0.19	0.00	0	0	20	10	1	sw.	C. R. Jefferis.
Tucson	Pima	2,390	31	72.7	− 0.4	97	23	43	21	51	0.00	− 0.13	0.00	0	0	15	16	0	sw.	University of Arizona.
Tucson (1)	....do	2,380	3	70.0	.....	98	4†	35	1	55	0.00	.....	0.00	0	0	22	8	1	w.	J. M. Robe.
Tucson (2)	....do	2,526	....	70.6	.....	97	8†	42	1	49	0.00	.....	0.00	0	0	18	9	4	w.	U. S. Coast & Geod. Sur.
Vail	....do	3,421	12	77.2	+ 2.6	100	29	52	1†	46	0.00	− 0.02	0.00	0	0	28	3	0	sw.	Agent, Southern Pacific Co.
Walnut Grove	Yavapai	3,649	18	.....	.....	.....	.....	.....	.....	.....	0.00	− 0.09	0.00	0	0	27	4	0	.....	J. O. Carter.
Wickenburg	Maricopa	2,072	12	70.2	+ 0.5	97	22†	40	14†	55	0.00	− 0.19	0.00	0	0	20	11	0	s.	Agent, S. F., P. & P. Ry.
Willcox	Cochise	4,164	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent, Southern Pacific Co.
Williams	Coconino	6,750	12	52.6	− 1.4	79	24	22	15	50	0.12	− 0.78	0.12	0	1	27	4	0	sw.	E. J. Nordyke.
Winslow	Navajo	4,853	7	60.4	.....	91	4	31	13	53	0.00	.....	0.00	0	0	27	4	0	.....	J. F. Bauer.
Yarnell	Yavapai	4,700	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. L. Bartholomew.
Yuma	Yuma	141	30	74.2	− 2.6	102	22	48	16	48	0.00	− 0.03	0.00	0	0	31	0	0	sw.	U. S. Weather Bureau.
Yuma (1)	....do	150	3	69.6	.....	99	22	41	16	54	0.00	.....	0 00	0	0	31	0	0	w.	A. L. Crane.
Nevada.																				
Caliente	Lincoln	4,407	1	58.4	.....	82	22†	33	14	46	0.02	.....	0.01	0	2	27	2	2	se.	Salt Lake Route.
Logan	Clark	1,700	4	68.2	.....	97	22	40	1	50	0.00	.....	0.00	0	0	11	17	3	s.	R. M. Filcher.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 9, Colorado Valley.*

Stations.	Watershed.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Battle Mountain	Snake																																
Daniel	Green		T.	T.						T.					T.	.12	T.	T.		.20						.50	T.					0.82
Eden	do		.04							T.	.01				T.	.01		T.	.04	T.			T.			.03	.04		T.			0.17
Green River	do			T.	T.					T.	.04				T.			T.	.01	T.						T.						0.05
Pinedale	do																		T.								.02	T.					0.02
Willow Ck. Cabin	do																																
Colorado.																																	
Ashcroft	Grand	.01					.08		.10		.08	.01		.05	.28	.24				.65	.05	.20					.02			.05		.02	1.84
Breckenridge	do		T.	T.							.06				T.	.16				.58	.22										T.	1.02
Buford	White						.06				.15								T.	T.													0.21
Cascade	San Juan						.10	.08	.09					.22	.49	.01				.04						.03						.26	1.32
Cedaredge	Gunnison																																0.00
Chromo	San Juan						T.	.50	T.	.08		T.	T.	T.	T.					T.					T.	T.			T.			.20	0.78
Cochetopa	Gunnison						.05	T.		T.					.07	.12				.04	.02											0.30
Collbran	Grand						T.				T.				.01																T.	0.01
Columbine	Yampa		.09				.06						.30			.21			.03	.28		.24						.05				1.26
Columbine Ranch	Gunnison						.17							.20																		0.37
Corona‖	Grand	.19		.47								.11								.98	.19	.20										2.14
Cortez	San Juan																																
Craig	Yampa		.02								.36										.01											0.39
Crawford (near)	Gunnison						.18				T.				.05						.02											.05	0.30
Crested Butte	do						.06	T.	T.		.35		T.	.05	.20	.22				.50	T.						T.			T.	.09	1.47
Delta	do						T.																										T.
Dillon	Grand	T.	T.	T.						T.							T.		T.	.21	T.	.12	T.								T.	T.	0.33
Durango	San Juan						.06	.03	.03					T.	.46											T.						.01	0.59
Eureka	do						.33	.22	T.					.14	.11	T.										.11							0.91
Fraser‖	Grand	T.	T.	T.	T.						.03				T.			.05	.10	.02									.10				0.30
Fruita	do						T.		T.	T.	T.				T.				T.	.09												T.	0.09
Gladstone	San Juan						.03	.02	.04						.15	.04				.19	.30				T.	.01						.16	0.94
Glenwood Springs (near)	Grand											T.																					T.
Grand Junction	do						T.				T.				T.				T.	.03					T.						T.	0.03
Grandlake	do										T.									T.	T.												T.
Grand Valley	do						T.	T.		T.		T.							T.	T.	T.					T.							T.
Gunnison	Gunnison							.15			T.				T.					.13												T.	0.28
Horsefly	do					T.	T.				T.		T.	T.	.12																		0.12
Ironton	do						.14	.06	.04		.02		.05	.04	.36					.48	.39					.03	.01					.14	1.76
Lake City	do						.04	.06			T.				.17	T.				.22	.02						.11					.10	0.72
Lay	Yampa						.01	T.			.24			T.						.15	T.											T.	0.40
Mancos	San Juan						T.	T.					T.																			T.	T.
Marble	Grand																																
Marshall Pass	Gunnison							T.								T.				T.				T.				T.				T.	T.
Meeker (near)	White							T.			.22									.03													0.25
Montrose	Gunnison																			.04													0.04
Nast	Grand										T.					.32					T.	T.											0.32
Pagoda	Yampa										.02				T.				T.	.01	T.												0.03
Pagosa Springs	San Juan							.10	.09				T.	T.	T.						.02					T.			T.	T.		.08	0.29
Palisades	Grand													T.	.02																T.	0.02
Paonia	Gunnison						.03	T.							.02					.07											T.	0.12
Parshall	Grand														.06						.25					.07						0.38
Pitkin	Gunnison						.13	.12	.12	.10	.10			.11		.27				.19							.40						1.54
Pyramid	Yampa		T.	T.			.01				.10								T.	.67		.70				T.						1.48
Rangely	White																																
Redcliff	Grand	T.					.20				T.	T.	.17						T.	.40		.10	T.		T.						T.	0.93
Rico	Dolores						.15	.08	.02	T.	.10		T.		.01					T.													0.36
River Portal	Gunnison						.03	.08			T.				.01					.05													0.17
Sapinero (near)	do						.03	T.			.03			T.	.09					.21	.02					T.	T.					T.	0.38
Shoshone	Grand	T.					.11				.06				.12					.01							.06						0.36
Silverton (near)	San Juan						.15	.14	.06		T.			.17	.28	.05				.06							.15					.04	1.10
Spruce Lodge	Grand	.03		.10							.10				.03	.12				.50	.23	.06							.02				1.19
Steamboat Springs	Yampa										.19									.26	.20												0.65
Tacoma	San Juan							T.					T.	.20	.34					T.						.03			T.				0.57
Terminal Dam	do						.05	.08						.07	.05	T.				T.						.05	T.						0.30
Terrill's Ranch	Grand						T.												.01		.08												0.09
Uncompahgre Plateau	Gunnison						T.	T.												T.												.12	0.12
Yampa (near)	Yampa						.03				T.					.14				.03	T.												0.20
Utah.																																	
Aneth	San Juan																																0.00
Castle Dale	Green																																0.00
Dragon	do	.02									.12	.01		.05	T.						.07						T.						0.27
Duchesne	do	T.													T.			T.		T.							T.	T.				T.
Elkhorn	do																																0.00
Emery	Colorado																																0.00
Escalante	do													.02																			0.02
Fort Duchesne	Green																																0.00
Fruitland	do																			T.							.01						0.01
Grayson	San Juan																																
Green River	Green																																0.00
Hanksville	Colorado																																
Hite	do																																0.00
Kanab	do																																
La Sal	Grand										T.			T.						T.													T.
Loa	Colorado																																
Manila	Green	.03								.17	.03								.05														0.28
Mexican Hat	San Juan																																
Moab	Grand													T.						T.													T.
Monticello	San Juan																																0.00
Orderville	Colorado													.08	.16																		0.24
Pine Valley	do														.40																		0.40
Price	Green																																0.00
Ranch	Colorado													.04	.12	.08																	0.24
St. George	do														T.																		T.
Scofield	Green													T.						.60							.06						0.66
Springdale	Colorado														.25																		0.25
Sunnyside	Green															.50				.60					T.								1.10
Teasdale	Colorado															.01			.01														0.02
Thompsons	Green							T.								T.				T.												T.	T.
Tropic	Colorado															T.																	T.

TABLE 2.—*Daily precipitation for May, 1911. District No. 9*—Continued.

Stations.	Watershed.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Utah—Continued.																																	
Trout Creek Ranger	Green																																
Vernal	do																															T.	T.
Woodside	do																																0.00
New Mexico.																																	
Alma	Gila							.40																									0.40
Aragon	do					T.																											T.
Aztec	San Juan						T.	T.						T.																			T.
Black Rock	Little Colo																																
Bloomfield	San Juan						T.	.02																								T.	0.02
Cambray	Mimbres																																0.00
Cliff	Gila																																
Columbus	do																																0.00
Deming	Mimbres																																0.00
Dulce	San Juan							.17				T.	T.	T.	.05											T.	.05					.18	0.45
Fort Bayard	Mimbres								T.																	T.					T.	T.
Fort Wingate	Little Colo																																
Fruitland	San Juan						T.	T.																									T.
Gage	Mimbres																																0.00
Gila Planting Station	do							T.	T.																							T.	T.
Hachita	Gila							T.																									T.
Haynes	San Juan												.25														T.					.01	0.26
Hermanes	Gila																																0.00
Lordsburg	do																																0.00
Luna	do																																0.00
Mimbres	Mimbres																																0.00
Pinos Altos	Gila																																
Pratt	do																																0.00
Putnam	San Juan																																
Redrock	Gila							.34																									0.34
Rodeo	do					T.																											T.
Arizona.																																	
Allaire's ranch	Sonora					T.																											T.
Alpine	Gila																																
Aztec	do																																0.00
Benson	San Pedro																																0.00
Bisbee	do					.02																			T.								0.02
Bonita	Desert																																
Bowie	Gila																																0.00
Buckeye	do																																0.00
Camp Verde	Verde																																
Canille	San Pedro					.02																											0.02
Casa Grande	Gila																																0.00
Casa Grande Ruins	do																																0.00
Cavecreek	Verde																																
Chin Lee	San Juan						T.	.01						T.																			0.01
Chlarson's Mill	Gila																																0.00
Clifton	do																																
Cline	Salt																																
Cochise	Desert																																0.00
Columbia	Agua Fria																																0.00
Congress	Hassayampa																																
Courtland	White																																0.00
Dos Cabezos	Desert																								10								0.10
Douglas	Sonora																																0.00
Dudleyville	Gila																																0.00
Fairbank	San Pedro							.02	.10																								0.12
Flagstaff	Little Colo														.08																		0.08
Flagstaff (1)	do														.09																		0.09
Flagstaff (2)	do														T.																		T.
Florence	Gila																																0.00
Fort Apache	Salt																																0.00
Fort Huachuca	San Pedro					T.	T.																										T.
Fort Mohave	Colorado																																
Gila Bend	Gila																																0.00
Globe	Salt																																0.00
Grand Canyon	Colorado														.14																		0.14
Grand Canyon (1)	do																																
Granite Reef Dam	Salt																																0.00
Greer	Little Colo																																
Heber	do																																
Hereford	Gila					.25																											0.25
Holbrook	Little Colo																																0.00
Indian Oasis	Desert																																
Intake	Salt																																0.00
Jerome	Verde														.06																		0.06
Keams Canyon	Little Colo																																0.00
Kingman	Colorado														.31																		0.31
Lewis Springs	San Pedro					T.	.10																										0.10
Maricopa	Gila																																0.00
McNeal	Desert																																0.00
Mesa	Salt																																0.00
Mohawk Summit	Gila																																0.00
Naco	San Pedro							.13																									0.13
Natural Bridge	Verde																																0.00
Oracle	San Pedro																																0.00
Osborn	do					.02																											0.02
Paradise	Desert						T.	T.																									T.
Parker	Colorado																																0.00
Payson	Verde																																0.00
Phoenix	Salt																																0.00
Phoenix (1)	do																																0.00
Phoenix (2)	do																																0.00
Pinal Ranch	Gila																																0.00
Pinto	Little Colo																																
Prescott	Hassayampa														T.																		T.
Quartzsite	Colorado																																0.00
Redrock	Santa Cruz																																0.00

TABLE 2.—*Daily precipitation for May, 1911. District No. 9*—Continued.

Stations.	Watershed.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Arizona—Contd.																																	
Roosevelt	Salt																																0.00
Sacaton	Gila																																0.00
St. Johns	Little Colo						T.																										T.
St. Michaels	do						T.	T.																									T.
Salome	Colorado																																0.00
San Carlos	Gila																																0.00
San Simon	do																																0.00
Seligman	Verde																																
Sentinel	Gila																																0.00
Showlow	Little Colo																																
Silverbell	Santa Cruz																																0.00
Snowflake	Little Colo																																0.00
Springerville	do																																0.00
Supai	Colorado																																0.00
Tempe	Salt																																0.00
Thatcher	Gila																																
Tombstone	San Pedro					.10																											0.10
Truxton	Colorado														T.																		T.
Tuba	Little Colo																																0.00
Tucson	Santa Cruz																																0.00
Tucson (1)	do																																0.00
Tucson (2)	do																																0.00
Vail	do																																0.00
Walnut Grove	Hassayampa																																0.00
Wickenburg	do																																0.00
Willcox	Desert																																
Williams	Colorado														.12																		0.12
Winslow	Little Colo																																0.00
Yarnell	Hassayampa																																
Yuma	Colorado																																0.00
Yuma (1)	do																																0.00
Nevada.																																	
Caliente	Colorado																									.01	.01						0.02
Logan	do																																0.00

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 9, Colorado Valley.*

Date.	Wyoming.				Colorado.										Utah.										New Mexico.			
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George.		Bloomfield.		Fort Bayard.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1....	49	25	58	25	63	32	68	38	65	15	60	26	55	25	68	30	68	52	77	46	76	37	81	35	76	30	70	35
2....	54	27	60	37	69	34	74	47	70	18	61	27	57	27	72	32	70	36	82	48	81	42	85	44	79	35	74	38
3....	58	28	66	34	71	34	79	46	72	22	69	26	65	27	75	30	76	39	85	51	85	41	86	43	82	36	78	41
4....	64	29	86	30	75	36	82	48	74	20	76	31	74	29	76	38	83	39	89	50	90	42	92	41	87	34	80	41
5....	78	28	80	40	76	38	87	54	73	19	83	33	77	29	79	39	86	38	92	51	92	43	88	47	92	44	83	47
6....	63	33	74	43	70	44	79	59	75	25	70	39	68	38	78	39	81	36	86	70	92	68	84	48	82	55	78	47
7....	63	20	76	40	70	40	80	50	77	20	76	28	73	29	75	35	80	34	89	55	92	44	88	41	84	52	86	46
8....	70	32	75	23	75	41	84	64	70	24	75	43	74	39	70	30	82	32	89	67	87	62	86	50	85	49	83	42
9....	56	30	68	36	72	38	81	56	68	28	75	35	71	38	74	31	78	38	87	62	86	59	82	51	82	44	81	41
10....	43	29	49	29	59	35	60	40	58	31	60	26	61	28	73	39	64	32	70	48	66	41	76	40	64	36	80	41
11....	60	16	64	21	66	26	69	39	63	14	60	22	60	17	75	31	71	25	86	44	76	33	83	34	78	24	78	42
12....	65	20	74	25	74	40	80	44	60	26	75	25	60	21	76	35	80	36	88	49	88	36	86	34	85	38	81	46
13....	64	28	71	50	66	50	76	58	65	37	68	48	65	44	74	39	75	45	85	56	87	40	82	50	79	48	83	47
14....	62	26	74	43	71	41	79	54	67	30	73	32	72	29	73	35	72	41	86	48	85	45	78	50	83	45	80	41
15....	54	32	61	41	64	34	69	44	69	25	65	34	68	32	75	33	80	38	68	49	70	51	71	38	86	40	80	42
16....	56	33	67	34	67	30	72	41	71	21	69	40	68	24	70	30	74	36	79	47	79	40	80	39	81	27	76	40
17....	54	34	65	39	73	32	80	51	70	20	73	28	73	25	71	45	74	32	83	53	81	52	78	50	84	36	82	38
18....	53	30	61	33	74	33	82	48	74	38	71	30	67	31	75	38	75	33	88	62	85	47	85	52	83	35	83	43
19....	43	18	45	28	61	40	56	39	64	.....	55	27	41	31	71	32	58	29	79	52	84	48	75	54	71	36	80	50
20....	53	24	60	24	59	33	64	37	59	.....	56	30	52	30	70	33	75	27	74	47	85	38	80	43	71	28	80	46
21....	62	25	68	24	68	30	72	40	61	.....	65	22	62	28	73	35	74	28	82	47	79	35	86	39	79	28	78	35
22....	65	28	74	30	74	34	80	45	64	.....	72	25	71	25	75	33	81	33	88	50	88	36	93	41	86	32	80	40
23....	68	30	79	41	76	38	86	56	71	.....	78	40	77	34	72	30	85	42	92	54	89	54	89	51	89	39	84	45
24....	68	34	73	55	74	41	78	62	70	.....	70	42	68	37	75	36	78	51	87	67	84	64	88	70	82	48	88	50
25....	67	34	75	43	72	48	83	64	74	.....	77	38	76	28	70	31	80	41	89	58	86	52	84	61	84	54	82	50
26....	50	30	59	32	63	38	69	50	76	.....	68	44	68	40	75	32	72	41	74	46	72	51	77	43	76	43	79	52
27....	47	24	56	31	68	32	71	43	65	.....	65	29	65	26	71	35	69	31	80	51	77	40	85	42	82	31	77	45
28....	67	23	68	24	75	35	83	45	70	.....	74	22	73	22	72	32	79	32	86	50	87	40	78	40	85	35	83	42
29....	63	26	74	42	75	46	83	52	71	.....	72	38	74	28	73	35	82	42	89	60	89	48	85	51	88	35	82	46
30....	71	28	80	29	77	42	85	54	72	.....	78	29	78	26	70	30	85	37	89	53	91	48	86	44	89	46	86	49
31....	75	34	81	48	74	54	88	62	76	.....	82	34	79	31	72	35	87	47	.....	.....	88	62	84	43	83	63	89	54
Mns.	60.2	27.7	68.4	34.6	70.0	37.7	76.7	49.4	69.0	24.1[m]	70.0	32.0	67.5	29.6	73.2	34.1	76.6	36.9	83.9[n]	53.0[n]	83.8	46.4	83.3	45.5	81.8	39.5	80.8	43.9

Date.	Arizona.																						Nevada.	
	Bisbee.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		San Carlos.		Tucson.		Yuma.		Logan.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	70	46	65	24	73	32	64	26	91	42	88	51	68	32	70	29	85	41	84	44	92	50	85	40
2	76	46	65	31	73	32	65	33	92	53	87	55	70	36	70	32	88	42	88	45	92	52	89	44
3	78	48	68	30	76	32	69	32	95	55	91	54	72	35	73	44	91	45	91	44	93	54	92	48
4	82	51	72	30	81	35	71	33	99	56	95	55	80	34	78	35	96	50	96	47	97	57	95	52
5	79	55	72	32	81	37	73	34	102	57	92	60	71	41	78	37	97	51	96	55	96	55	93	49
6	78	50	68	40	78	48	67	41	91	48	90	64	64	41	79	50	94	59	95	60	91	60	87	49
7	81	55	71	32	80	46	79	36	100	49	96	62	73	40	79	48	97	56	96	57	94	54	91	46
8	82	58	69	39	82	45	68	41	97	55	90	62	75	48	78	40	98	54	96	57	96	58	92	46
9	79	62	65	42	80	40	64	44	99	43	90	59	73	42	74	51	92	53	93	59	94	58	88	54
10	78	57	61	29	81	36	62	32	91	42	88	55	72	38	71	44	89	49	87	54	91	55	82	43
11	78	50	67	22	80	35	68	24	93	49	90	52	72	29	73	28	93	45	93	46	94	55	90	42
12	76	62	68	29	73	32	70	30	95	54	90	57	74	37	73	34	89	53	88	60	93	54	91	42
13	78	54	66	38	77	46	66	34	95	54	91	63	72	42	73	50	95	57	92	58	94	56	89	47
14	72	53	60	33	76	38	66	35	81	46	84	60	62	42	72	46	89	50	93	57	78	57	82	45
15	72	48	55	29	68	36	60	30	81	44	76	52	60	37	75	38	86	40	81	47	79	53	79	48
16	78	48	66	22	75	30	66	23	89	53	84	49	71	29	72	26	89	44	89	44	90	48	84	42
17	80	48	67	31	79	33	70	30	93	52	89	53	71	36	75	33	88	47	94	44	91	51	86	58
18	78	50	69	40	77	35	70	42	90	52	93	58	72	36	73	42	91	42	92	58	93	54	92	47
19	77	56	63	41	77	40	71	41	88	55	91	61	72	45	71	50	89	51	90	59	95	59	89	47
20	72	52	61	33	70	40	74	35	96	49	88	56	70	39	68	38	86	54	86	55	95	62	90	45
21	76	46	68	25	76	32	74	27	101	51	92	59	74	30	68	30	89	45	90	43	101	65	93	45
22	81	51	74	28	80	35	70	29	102	52	97	58	75	31	78	30	96	47	96	45	102	54	97	50
23	84	54	71	37	81	41	74	38	100	65	99	60	80	36	77	36	98	49	97	55	99	58	96	53
24	82	56	69	41	80	44	76	44	96	58	96	63	76	42	79	38	95	57	95	62	95	65	90	57
25	80	56	66	38	79	43	72	39	88	45	92	61	74	30	78	42	94	54	93	61	87	59	84	54
26	77	56	64	30	72	43	68	32	93	45	83	56	75	31	73	37	85	55	86	58	89	50	82	42
27	78	50	68	24	75	34	68	26	94	55	90	52	74	30	72	29	89	44	90	50	93	49	90	42
28	78	51	67	29	79	40	65	30	95	55	93	56	73	28	78	38	94	51	92	50	93	53	92	42
29	78	55	68	35	79	41	70	36	95	55	93	62	74	30	78	38	94	58	93	62	93	56	91	53
30	84	58	70	31	78	40	72	30	95	52	93	65	76	27	80	42	93	57	94	67	90	56	91	47
31	86	62	68	34	86	46	68	33	92	55	90	59	73	29	81	50	95	55	96	59	90	63	87	46
Means	78.3	53.0	66.8	32.2	77.5	38.3	69.0	33.5	93.8	51.5	90.4	57.8	72.2	35.3	74.7	38.9	91.7	50.2	91.7	53.7	92.6	55.8	89.0	47.3

[a], [b], [c], etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT NO. 10, GREAT BASIN.

ALFRED H. THIESSEN, District Editor.

GENERAL SUMMARY.

May, 1911, was a cool, windy month, with an unusual lack of moisture. The season was backward, probably two or three weeks. The wind movement was greater than the average, drying vegetation and the soil rapidly, and also injuring leaves of plants in places by blowing sand against them. Compared with May of 1910, it averaged 5° colder, but the precipitation was somewhat heavier.

No severe atmospheric disturbance passed over the Great Basin during the month; but a storm center settling over western Colorado on the 10th, followed by an area of high pressure then covering the entire Northwest, caused frost conditions, which were more or less severe throughout the district. Alfalfa was frozen, potato vines nipped, early beets, strawberries and other garden truck were damaged as well as some fruit, especially apples.

There was an unusually large number of thunderstorms, especially in Nevada, but they were, as usual at this season, very mild.

The average number of rainy days was 3; clear days, 13; partly cloudy days, 10; and cloudy days, 8.

TEMPERATURE.

The temperature for the district averaged 52°, which is about 2° below normal. The mean temperature at the various stations ranged from 39.4° at Tahoe, Cal., to 72.8° at Jean, Nev. The highest means occurred in the sheltered valleys of Utah and in southern Nevada; and the lowest in parts of the Oregon and California areas.

Most stations in the district reported monthly mean temperatures below normal; and in most cases where mean monthly temperatures above normal occurred, the departures were small. The greatest deficiences occurred in central Nevada, with −9.5° at Battle Mountain; the greatest excess was 3.3°, at Mount Nebo, Utah.

The first two days of the month were cool, a few stations reporting their lowest temperatures on those days. A period of warm weather prevailed from the 3d to the 5th, inclusive, when some stations reported the highest temperatures for the month, notably Iosepa, Utah, where the maximum thermometer registered 100° on the 5th. After this date temperatures fell steadily until the 10th, when killing frosts occurred. The weather grew warmer after the 11th, and nearly normal temperatures were recorded for the remainder of the month, with the exception of the 25th and 26th, which were unusually cool, and freezing temperatures were reported at several stations.

The highest temperature for the month was 100°, at Iosepa, Utah, on the 5th and 25th, the next highest being 93°, at Jean, Nev., on the 21st. The lowest temperature was 12°, at Ibapah, Utah, on the 26th, the next lowest being 13°, at Cliff, Oreg., on the 13th.

PRECIPITATION.

The May precipitation averaged 0.66 inch for the district, which is 0.79 inch below normal. Considering only those stations with long records, but two reported amounts above normal. The chart of precipitation shows the usual regional variations, but small areas exhibited widely different amounts as well, indicating the usual summer characteristic.

The largest amounts of precipitation were recorded on the western slopes of the Wasatch Mountains in Utah, in central Nevada, and at a few stations in the California area. The greatest amount reported from any station was 1.84 inches at Salt Lake City, Utah, while no precipitation occurred at several stations.

In the Oregon and California areas light showers fell daily from the 1st to the 18th, but they were not general except on a few days. There were a few showers in the last decade of the month in those areas, being general in the California area on the 29th and 30th. The rainfall for the remaining portion of the district shows the usual distinguishing feature of summer rains in this region; that is, light showers on various dates. The larger portion of the rain, however, fell from the 9th to the 19th, and on the 25th and 26th.

WHERE THE SNOW LIES IN SUMMER.

By J. CECIL ALTER, Observer.

Contrary to popular supposition, the snow that clings to the mountain sides throughout the summer and keeps the irrigation streams running steadily in August and September, is not hidden in the cool shadows of the forests, but lies out in the open, where the summer sun and the mountain winds may attack it freely.

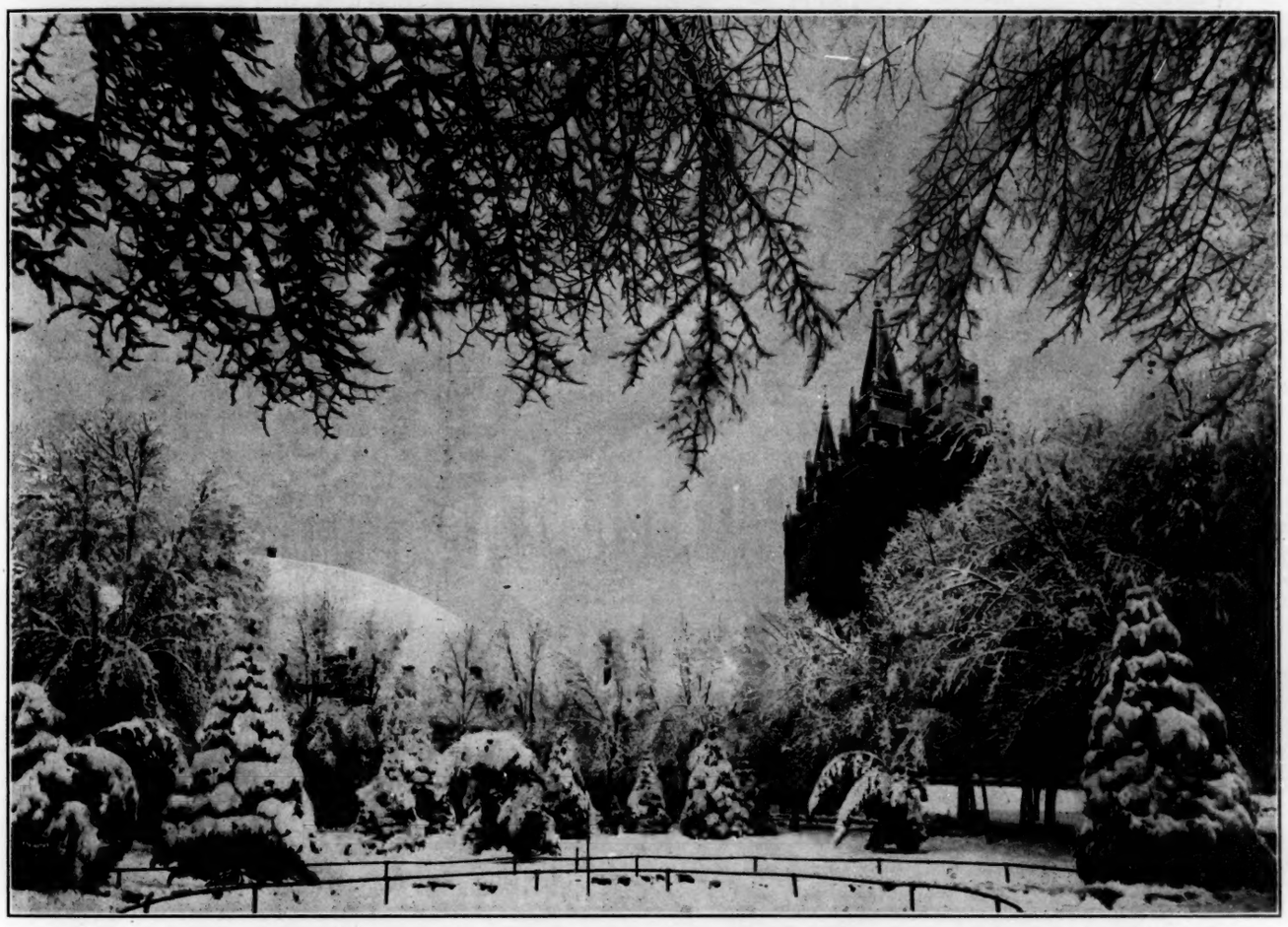
Generally in the Rocky Mountains the snow disappears, as a cover, up to the 8,000-foot contour in April or May, receding to the 10,000-foot level by June, and by the 1st of August even the crests are usually bare. The only snow remaining lies in patches, and this, with the moisture already absorbed by the ground, forms the subsequent stream supply.

These limited regions of snow have naturally more the consistency of ice than of snow, ranging from 50 to 75 per cent of the density of water, sometimes containing 85 per cent, otherwise they could not long endure the constant winds and the almost uninterrupted summer sunshine of the Rocky Mountain region.

As a rule these icy stores of snow are more numerous on the north and west slopes though not in places entirely obscured from the sun. Usually less snow falls on the south and east slopes, because nearly all Rocky Mountain storms come from the west or northwest, and deposit

most of their moisture on the windward sides of the mountains. The snow that does fall on the southerly slopes receives the more direct rays of the sun and is frequently melted before the following storm, even in winter.

On the freely exposed northerly slopes, where the snow deposit is much greater than on the south, the slanted rays of the sun melt it more slowly, serving chiefly to soften it; and the steady, strong winds, which often have a temperature well above freezing, settle it gradually, and with the aid of frequent freezing temperatures at night the snow deposits gradually assume the characteristics of small glaciers, which are formed in the depressions by gravity, under the unshaded sun's rays.



Trees carrying 5 inches of moist snow, Mormon Temple block, Salt Lake City, Utah. Photo. by C. R. Savage.

When snow falls, there are usually high, driving winds in the mountains that carry the snow into the hollows and ravines, leaving the crests and rounded tops but thinly covered, if covered at all. After the storms are over the wind and the sun assist gravity in solidifying the deposit, and the precipitation from subsequent storms, which is frequently similarly distributed if in the form of snow, increases the weight in the hollows. In addition heavy rains are not at all unusual, and these make the snow deposit very hard and heavy.

As summer advances the surface layers melt slowly and the water trickles gently away, often serving only to moisten the soil below the snow pack. However, from the larger drifts, and where the mountain side is well soaked, small streams at times appear on the surface, but as a rule the water from a great many drifts is required to form the stream that has a good steady flow all summer long. These occur on the broader mountain slopes in practically all parts of the Rocky Mountains north of the Grand Canyon.

Practically all the streams that head as high as 10,000 feet carry water to the irrigated farms, or to other outlets, all summer, though usually the volume is much diminished in late July, August, and September. Some watershed slopes are so porous that the stream is lost through seepage; and nearly all the smaller streams dry up in midsummer, as they are fed by snow deposits on the lower, usually flatter, slopes where the accumulations have been less.

When there is no warm weather in winter, favorable for packing and solidifying the snowfall in the sunny hollows, the snow supply may be seriously depleted during the early spring run-off, and in late summer even the longest streams may go dry under such circumstances.

Over forested regions no more snow falls than elsewhere with similar topographical exposures, but the falling snow is caught by the millions of branches on the trees, and much of it never reaches the ground but is evaporated from the swaying limbs. This often occurs while temperatures are below freezing, as evaporation from snow, while it is usually a slow process. is in this case hastened by the much greater surface exposure to the drying breezes.

It has been observed in well forested regions that a downfall of 4 or 5 inches of snow may be almost entirely supported by the branches of the evergreen trees, even when deposited in a high wind, provided the snow was sufficiently moist when it fell, In such cases a subsequent freeze may attach it firmly to the branches. Since nearly all heavy snows come during only moderately cold weather and often actually begin as rain, the amount of moisture that clings to the trees to be subsequently evaporated is very great. It has been variously estimated at from 50 to 80 per cent of the fall of snow, under the varying conditions that exist over the forest.

In the forest openings the snow depth is something near what the depth would be if there were no forest or high winds, but the influences that tend toward solidifying it are handicapped by the forest surroundings, and, being loosely stored, the snow is in less favorable condition for long keeping. It is not unusual in late winter to see in a forest acres of bare ground under the trees, and just beyond the limits of the boughs of the outside trees to see snow a foot or two in depth lying generally over the unforested slopes.

Seldom a winter passes without warm periods, and tremendous mountain floods may occur as a result of long-continued warm, southerly winds, and much sunshiny weather, followed by a general, heavy rain. At these times the loosely deposited snow in the forested regions is carried quickly away, reaching the waterways before the more solidly packed snow elsewhere is melted, although this also disappears with great rapidity. The only snow that can long withstand these winter thaws is that which has been solidly packed in the swales, pockets, and hollows by the cumulative and gradual influences of the sunshine, the wind, and the winter rain. And for such snow packs as these, the late summer irrigator is duly grateful.

There has been a great deal of discussion about the influence of forests on the run-off from watersheds, and the retention of water for late summer use.

A number of scientific men have expressed the opinion that the slopes and unarable valleys should be reforested so as to minimize flood conditions, which, they allege, are intensified by the lack of forest cover to delay the melting of the snow and impede the flow of that already melted. However, the best evidence obtainable at present seems to support the ideas of Prof. Willis L. Moore, Chief of the Weather Bureau, that—



Snow fields at Lake Martha, Wasatch Mountains, Utah, early August, 1910. Elevation, 11,000 feet; looking east-southeast. Photo. by Shipler.

> The rugged mountain slopes and tops, where land has little value, are unimportant as flood producers; * * * the forests should be preserved for themselves alone, or not at all. * * * A flood in any given stream is usually caused by the precipitation over its entire watershed * * * and is affected but comparatively little * * * by the precipitation over the extreme upper reaches, usually the forested areas.

The claim that late irrigation would be crippled by the removal of the forests or benefited by reforesting large areas would also appear to be erroneous, as the late summer irrigator gets his water principally from the snow

packs that lie out in the open, solid from the effects of the sunshine, wind, and rain, the softer snow in the forests and other shady places having disappeared in April, May, or June.

ORCHARD HEATING.

By ALFRED H. THIESSEN, Section Director.

GENERAL.

On a recent visit to Grand Junction, Colo., the writer had an opportunity of studying methods of frost fighting as carried on in the Grand Valley. This valley has 20,000 acres in fruit trees and 10,000 in bearing, reaching from Palisade to Fruita. The valley is similar to a huge trough, bordered, as it is, on each side by high mesas. This natural conformation assists the growers immensely in their frost-fighting campaigns, lessening the strength of the wind, moderating the temperatures, and forming a pocket to hold the smoke generated by the heaters.

ORGANIZATION.

The one thing that makes orchard heating so effective in the Grand Valley is the close cooperation which exists between the growers, the chamber of commerce, and the local office of the Weather Bureau at Grand Junction. The fruit section is divided into districts, and a grower who owns an orchard representative of his district acts as weather observer. On nights of expected frost the local office of the Weather Bureau remains open all night to receive hourly and sometimes half-hourly readings from thermometers exposed throughout the fruit section and to send out warnings, if necessary. By this system the worry of watching for frost devolves on only a few trusted observers, who by their self-sacrifice make it possible for the majority of the growers to rest quietly.

On nights when heating is necessary, a great deal of assistance is required by the farmers. To aid them, the town people offer their services gratuitously. In order to distribute this help quickly the chamber of commerce keeps a card list of farmers desiring aid, and details certain helpers to certain farmers. The volunteers are taken to the orchards in all manner of conveyances—buggies, wagons, automobiles, and interurban and railroad cars—the owners of which freely contribute their use for the general good.

When frost is expected, the fruit growers' association and the local office of the Weather Bureau work harmoniously together, and the temperature conditions over the entire valley are carefully watched. This detailed supervision is necessary, owing to the fact that at times it has been found needful to heat one section and not another, a difference of several degrees frequently existing between the warmest and coldest parts of the district; and these conditions may on other occasions be reversed—the coldest part one night may be the warmest part on another.

Watchfulness and preparedness are the keynotes of success. Sometimes only one or two districts are in danger; at other times the entire section is warned. Warnings are sent from the Weather Bureau office to the secretary of the chamber of commerce, who requests the telephone operators to awaken the growers in the endangered district, and the work of firing is begun at once. To quote the Weather Bureau official at Grand Junction:

> As if by magic the entire district becomes a blaze of light overhung by a pall of fiery red smoke clouds. The heat produced is regulated by varying the number of pots lighted per acre and through changing, by means of covers, the size of the flames from the individual pots. From a distance the scene reminds one of fairyland. Within the orchards, among the smoke and smell, a lurid glare lighting up the trees, move the fleeting figures of the smudgers poking the flaming, sizzling pots, and one might imagine the purpose of the operation one of evil rather than good.

In order to work so quickly, all growers who intend to heat prepare to the last detail. Before the frost period begins pots are set out between the trees, placing them slightly to one side of the center to provide a passageway for a team, and filled with oil or with kindling and coal. All over the orchard in handy locations lie piles of coal ready for the recharging process as soon as the fires begin to get low. Oil wagons filled with oil are also in readiness to be hauled into the orchards to refill the pots when necessary. The growers in the Grand Valley believe in firing long after sunrise.

MATERIAL.

All kinds of orchard heaters are used, burning either oil or coal, although occasionally, if a grower has accumulated a large quantity of brush, prunings, or the like, he will pile it to windward of his orchard and burn it.

The fruit growers' association buys crude oil direct from the refineries at $0.035 per gallon and sells it to the grower at $0.0482—just enough in advance of the purchase price to pay for handling it. Many growers own 600-gallon tank wagons in which they haul oil to their farms, where it is stored in large steel or cement tanks.

Coal is sold to the growers at prices ranging from $2 to $2.75 per ton. Some growers are located very near mines, and buy direct from them.

RESULTS.

The question of whether it pays or not to fire an orchard is one which can not be easily answered offhand. Of course, one can easily see that a grower may fire so many times that the amount of money realized from the fruit saved will not pay for the fuel, extra help, and deterioration of his heaters. This question is complicated by the varying market conditions. In general the growers are enthusiastic over the results of orchard heating, but there are always a few growers in all sections who do not believe in it.

PROBLEMS IN CONNECTION WITH ORCHARD HEATING.

The question as to just what temperature will kill a bud, blossom, or fruit is a very complicated one, and I doubt whether it can be answered without giving many qualifications. The killing temperatures will vary with the stage of advancement of the fruit, the previous treatment of the tree, the character of the previous season, the length of time that the fruit is subjected to certain temperatures, and other influences more or less important.

If the killing temperature for fruit at any particular stage can be given, then the grower has an inkling when to fire. Observations of the temperature of the air are, however, not good indications of the temperature of the buds; other meteorological conditions vary the relation. The temperature of a bud surrounded by clear, dry, calm air at 32° may be quite different from that of one enveloped by moist, moving air at the same temperature but with a cloudy sky.

At present it seems best, with a condition of falling temperature and a fair assurance that a killing tempera-

ture will be reached, to fire at 34°. It is much easier to maintain a certain temperature than to raise it.

An estimate of the probable limit of the minimum temperature is one of great economical importance. An experienced grower should know what his heaters can do, and from his knowledge of the probable minimum temperature judge whether he is able to keep the temperature above the danger limit. In cases it may be more economical for him to save his fuel and stand a fruit loss than to burn his fuel and effect only a slight saving of fruit.

Further investigation should be carried on with the end in view of determining just how long buds must be subjected to certain temperatures to be killed, and also to ascertain other unknown factors which determine the resistivity of a bud to frost.

The whole question of materials used for and methods of smudging or heating should be carefully studied. The kind of fuel to use is oftentimes a purely local question, but even where one kind of fuel is just as available as another there is a wide difference of opinion as to which is the better. The style of heaters is a subject on which practical growers differ greatly. Some believe in a large number of small pots, others in a smaller number of large ones. A new kind of pot is a combination of a heater and a vaporizer, supplying moisture as well as heat to the air.

Last spring the writer advised that experiments be made regarding the advisability of throwing a canopy over each tree on nights of expected frost, tying it under the branches so that only the tree would be enveloped. A sheet-iron lantern hung among the branches might be sufficient to save the buds, or heat could be introduced in any quantity by means of a pipe from a suitable heater. The cost of fuel by this method would be very low. The practicability of the scheme depends entirely on how cheaply a suitable fabric could be obtained. The size of the hood or canopy could be greatly reduced by first tying the branches together.

Retarding the blossoming period has been tried by many to save the fruit from frost. This has been done by heavily mulching the ground around the trees after a hard freeze in winter. Little seems to be known regarding the efficacy of this process, some contending that the blossoms are kept back, others that they are not. The writer suggested retarding the blossoms by covering the foliage with a hood made of some waterproof material and well ventilated. This hood should be kept on the trees during a portion of the late winter or early spring, thereby not exposing the buds and twigs to the sun, and their temperatures would at all times be nearly that of the free air. It is thought that by this method the buds could be prevented from swelling sufficiently to withstand the hardest of the spring freezes.

It is the opinion of some authorities that under ordinary circumstances there is enough nutrient matter in the twigs, branches, and trunk of a tree to nourish the buds even if the ground around the roots is frozen.

I noted that better results were obtained in orchards that were surrounded by other orchards. These orchards acted as windbreaks, making artificial heating much more effective. Efficient windbreaks should be established on the north and west sides of all orchards. Poplar trees, headed low, willow, cherry trees, and high hedges could be used for this purpose.

TABLE 1.—*Climatological data for May, 1911. District No. 10, Great Basin.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Border	Uinta	6,085	9	48.0	+ 1.2	80	31	19	11	46	1.45	− 0.05	0.65	0	4	14	5	12	w.	S. W. Condron.
Cokeville	do	6,204	1	46.2	.....	76	31†	17	11	48	1.25	.....	0.49	0	6	26	2	3	w.	E. J. Tuckett.
Evanston	do	6,860	14	47.0	+ 1.0	75	31	20	10	40	1.07	− 0.66	0.35	2.0	5	11	16	4	w.	Frank Tucker.
Idaho.																				
Geneva	Bear Lake	.....	3	.....	.....	.....	.....	.....	.....	.....	0.80	.....	0.54	1.0	3	20	7	4	.....	F. W. Boehme.
Grace	Bannock	5,400	5	.....	.....	.....	.....	30	20†	.....	1.14	.....	0.62	T.	5	13	14	4	s.	Harold Cole.
Paris	Bear Lake	5,946	17	46.8	− 2.3	78	31	22	7†	44	1.21	− 0.06	0.50	T.	5	21	1	9	w.	John Norton.
Stone	Oneida	4,520	2	50.6[e]	.....	82	4†	18[k]	1	51[k]	0.38	.....	0.15	0	4	17	5	9	s.	Thos. W. Roe.
Weston	do	4,460	13	52.0	− 0.3	81	5	23	11	45	1.10	− 1.24	0.48	0	7	12	2	17	sw.	W. T. Chatterton.
Utah.																				
Alpine	Utah	4,900	14	.....	.....	.....	.....	.....	.....	.....	1.43	− 1.50	0.72	0	3	13	8	10	.....	T. F. Carlisle.
Beaver	Beaver	6,000	8	53.5	.....	78	4	27	10	40	0.44	.....	0.28	0	4	15	15	1	sw.	James Connell.
Black Rock	Millard	4,872	11	52.0	.....	85	4†	21	1	56	T.	− 1.21	T.	0	0	.....	.....	.....	.....	W. D. Livingston.
Castle Rock	Summit	6,244	8	.....	.....	.....	.....	.....	.....	.....	0.78	.....	0.40	2.0	5	13	6	12	w.	David Moore.
Cedar City	Iron	5,750	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Parley Dalley.
Corinne	Boxelder	4,240	41	55.0	− 5.3	88	30	20	11	55	1.06	− 0.34	1.06	0	1	13	4	14	sw.	A. C. Murphy.
Deseret	Millard	4,541	17	55.6	− 0.2	83	4†	25	11	44	0.20	− 1.09	0.15	0	2	22	4	5	s.	S. W. Western.
Enterprise	Washington	4,270	3	.....	.....	.....	.....	.....	.....	.....	0.27	.....	0.27	0	1	23	6	2	s.	John Day.
Fairfield	Utah	4,866	0	.....	.....	.....	.....	.....	.....	.....	0.70	.....	0.65	0	2	15	10	6	sw.	W. Harden Ashby.
Farmington	Davis	4,267	11	56.8	+ 1.2	85	5	32	20	44	0.74	− 2.55	0.51	0	2	22	6	3	s-nw.	Charles Boylin.
Fillmore	Millard	5,100	21	59.3	+ 2.1	89	4	29	20	48	0.88	− 0.84	0.59	0	2	.....	.....	.....	.....	J. J. Starley.
Frisco	Beaver	7,318	17	50.6	− 4.6	82	22	16	10	55	0.00	− 1.00	0.00	0	0	.....	.....	.....	.....	E. R. Smyth.
Garrison	Millard	.....	8	55.4[a]	.....	88	30	27	10	48	0.20	.....	0.20	0	1	18[a]	8[a]	4[a]	s.	E. M. Smith.
Government Creek	Tooele	5,277	11	54.0	+ 1.2	82	5	27	10	39	0.55	− 1.10	0.39	0	2	15	2	14	n.	Walter James.
Grantsville	do	.....	2	.....	.....	.....	.....	.....	.....	.....	0.26	.....	0.12	0	4	13	11	7	n.	Dr. J. C. Woodmansee.
Grouse Creek	Boxelder	.....	1	.....	.....	.....	.....	.....	.....	.....	0.86	.....	0.68	0	4	10	10	11	sw.	Phillip Paskett.
Heber	Wasatch	5,606	18	51.8	− 0.1	82	31	21	11	50	1.10	− 0.64	0.36	8.0	6	12	10	9	s.	John Crook.
Henefer	Summit	5,301	12	52.0	+ 0.9	82	4†	19	11	49	0.78	− 1.38	0.30	0	8	11	11	9	nw.	William Brewer.
Hooper	Weber	4,436	0	.....	.....	.....	.....	.....	.....	.....	0.78	.....	0.30	0	4	.....	.....	.....	.....	T. W. Jones, jr.
Ibapah (near)	Tooele	7,500	6	45.8[b]	.....	67	21†	12	26	36[b]	1.63	.....	0.85	17.5	3	22	7	2	.....	J. S. Lawton.
Ibex	Millard	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John J. Watson.
International	Tooele	5,370	2	.....	.....	.....	.....	.....	.....	.....	1.38	.....	0.98	.....	4	18	12	1	se.	I. S. & R. Co.
Iosepa	do	.....	1	60.4	.....	100	5†	27	11	51	0.68	.....	0.48	0	2	12	4	15	n.	George K. Hubbell.
Kanosh	Millard	5,250	3	.....	.....	.....	.....	.....	.....	.....	0.74	.....	0.52	0	2	.....	.....	.....	.....	George Crane.
Kelton	Boxelder	4,230	33	53.0	− 5.7	78	24	28	6†	42	0.45	− 0.34	0.25	0	2	8	22	1	sw.	F. W. Klock.
Lemay	do	.....	0	58.4	.....	84	23	32	26	40	0.12	.....	0.12	0	1	18	10	3	se.	Agent, Southern Pacific Co.
Levan	Juab	5,010	21	55.3	+ 0.9	82	4†	27	11	44	0.45	− 1.43	0.25	T.	3	17	7	7	sw.	William Brown.
Logan	Cache	4,507	20	53.2[c]	− 1.1	79	30	32	1†	37	1.77	− 0.67	0.39	0	8	.....	.....	.....	.....	Utah Experiment Station.
Lucin	Boxelder	4,504	7	53.6	.....	82	30	26	8†	50	0.35	.....	0.35	0	1	4	26	1	.....	C. J. Burke.
Lund	Iron	5,086	0	50.5[a]	.....	84	22	25	11	53	0.29	.....	0.26	.....	2	17[a]	13[a]	0[a]	sw.	Job F. Hall.
Manti	Sanpete	5,575	17	48.4	.....	70	5†	26	11†	35	0.39	− 0.92	0.25	.....	2	8	1	22	sw.	J. M. Anderson.
Maple Creek	Utah	.....	0	.....	.....	.....	.....	.....	.....	.....	1.47	.....	1.10	0	5	10	15	6	.....	Lewis W. Gillilan.
Marion	Summit	6,750	7	.....	.....	.....	.....	.....	.....	.....	1.27	.....	0.67	9.0	5	5	7	19	s.	Jas. Woolstenhulme.
Marysvale	Piute	6,180	12	52.6	+ 1.3	84	4	19	17	53	0.07	− 1.19	0.06	0.6	2	8	11	12	se.	John W. Henry.
Meadowville	Rich	6,200	12	50.5	+ 1.9	81	31	25	7†	47	1.15	− 1.01	0.50	2.0	3	15	4	12	w.	J. S. Moffat.
Mercur	Tooele	.....	0	.....	.....	.....	.....	.....	.....	.....	0.55	.....	0.40	0	7	4	19	8	w.	T. H. Franklin.
Midlake	Boxelder	.....	0	58.0	.....	73	5†	41	10†	24	0.12	.....	0.12	0	1	12	1	18	nw.	Agent, Southern Pacific Co.
Milford	Beaver	4,962	7	56.6	.....	84	4	25	1†	48	0.05	.....	0.05	T.	1	6	14	11	sw.	J. C. Manuel.
Millville	Cache	4,848	16	.....	.....	.....	.....	.....	.....	.....	1.65	− 0.70	0.49	0	8	8	20	3	s.	Fred Yeates.
Minersville	Beaver	5,070	14	.....	.....	.....	.....	.....	.....	.....	0.11	− 1.49	0.11	0	1	.....	.....	.....	.....	Geo. Roberts, sr.
Modena	Iron	5,479	11	52.1	− 2.4	79	22	24	11	45	0.06	− 0.81	0.04	0	2	15	13	3	sw.	U. S. Weather Bureau.
Morgan	Morgan	4,280	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. Visick.
Moroni	Sanpete	5,519	3	53.4	.....	80	5	28	20	39	0.37	.....	0.34	T.	2	10	9	12	sw.	B. F. Eliason.
Mount Nebo	Utah	4,650	10	59.4	+ 3.3	86	23	32	10	46	0.26	− 1.27	0.20	0	2	22	6	3	n.	D. C. Walkey.
Nephi (near)	Juab	6,059	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. Boswell.
New Castle	Iron	.....	0	.....	.....	.....	.....	.....	.....	.....	0.34	.....	0.34	0	1	.....	.....	.....	.....	T. W. Jones.
Oak City	Millard	4,900	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Peter Nielson.
Ogden	Weber	4,310	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Van De Graff.
Park City	Summit	7,800	14	48.0	− 0.3	75	30	15	8†	50	0.20	− 1.56	0.11	0	4	15	11	5	.....	Gertrude Evans.
Park Valley	Boxelder	.....	0	.....	.....	.....	.....	.....	.....	.....	0.39	.....	0.38	0	2	16	3	12	nw.	Thomas Stirland.
Parowan	Iron	5,970	20	56.1	+ 1.2	80	4†	29	1†	48	0.18	− 0.99	0.18	.....	1	28	0	3	.....	S. Matheson.
Payson	Utah	4,637	1	.....	.....	.....	.....	.....	.....	.....	1.65	.....	0.84	.....	5	8	12	11	sw.	D. L. Coombs.
Pelican Point	do	.....	0	.....	.....	.....	.....	.....	.....	.....	0.77	.....	0.66	0	3	23	0	8	.....	B. M. Mendenhall.
Pine Cliff Ranch	Summit	.....	0	.....	.....	.....	.....	.....	.....	.....	1.10	.....	0.37	3.7	6	.....	.....	.....	.....	Lyman E. Leavitt.
Pinto	Washington	5,907	14	50.4	+ 0.9	75	23†	18	11	49	0.40	− 0.69	0.40	.....	1	22	6	3	s.	J. H. Harrison.
Promontory	Boxelder	4,913	40	.....	.....	.....	.....	.....	.....	.....	0.14	− 0.67	0.14	0	1	.....	.....	.....	.....	F. C. Houghton.
Provo	Utah	4,532	19	57.0	− 0.3	87	5†	26	11	54	1.60	− 0.35	1.40	0	2	8	22	1	n.	James A. Oliver.
Randolph	Rich	6,442	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William Rex.
Richfield	Sevier	5,350	21	56.8[b]	+ 0.6	86	4	28	1	51	0.00	− 0.52	0.00	0	0	16[b]	5[b]	7[b]	sw.	Joseph J. Jensen.
Saltair	Salt Lake	4,220	8	58.6	.....	82	5	39	11	31	1.23	.....	0.84	0	7	.....	.....	.....	.....	E. J. Bench.
Salt Lake City	do	4,360	38	57.2	− 1.1	85	30	32	10	32	1.84	− 0.11	0.55	T.	9	15	13	3	nw.	U. S. Weather Bureau.
Scipio	Millard	5,260	16	53.6	+ 0.3	82	4	18	11	53	T.	− 1.67	T.	0	0	10	12	9	sw.	Thomas Memmott.
Silver City	Juab	6,127	1	.....	.....	.....	.....	.....	.....	.....	0.39	.....	0.24	0	2	12	13	6	sw.	J. L. Stark.
Spanish Fork	Utah	4,585	2	59.2	.....	87	30	33	10†	40	1.52	.....	1.24	0	3	5	19	7	.....	U. S Reclamation Service.
Strawberry Tunnel	do	7,650	5	47.6	.....	76	4†	18	10	44	1.65	.....	0.61	14.5	6	9	13	9	.....	Do.
Thistle	do	5,075	19	53.2	− 1.5	88	13	20	21	57	0.93	− 0.36	0.45	0	3	3	17	10	s.	John Thorgeirson.
Tooele	Tooele	4,900	15	54.4	− 1.1	81	31	31	10	38	0.86	− 1.77	0.57	0	4	1	14	16	nw.	E. A. Bonelli.
Utah Lake pumping station.	Utah	4,500	6	56.4	.....	90	30	27	11	51	0.95	.....	0.58	2.5	4	19	7	5	n.	W. A. Knight.
Whiskey Creek	Millard	.....	0	.....	.....	.....	.....	.....	.....	.....	0.35	.....	0.35	1.0	1	.....	.....	.....	.....	T. B. Perkins.
Woodruff	Rich	6,500	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. Sidney Pusey.
Oregon.																				
Burns	Harney	4,157	20	45.9	− 2.9	78	31	17	6	42	0.75	− 0.04	0.22	0	8	7	20	4	sw.	J. C. Welcome, jr.
Cliff	Lake	4,300	4	43.8	.....	76	30	13	25	53	0.64	.....	0.33	0	7	5	8	18	n.	John C. Green.
Paisley	do	4,500	8	48.7	.....	77	21	26	6	37	0.10	.....	0.10	0	1	12	15	4	w.	E. C. Woodward.
Silver Lake	do	4,700	14	46.6	− 2.2	78	21†	22	6	49	0.82	− 0.41	0.20	0	9	6	20	5	w.	L. W. Charles.
California.																				
Glen Alpine	Eldorado	6,850	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Carl Fluegge.
Tahoe	Placer	.....	1	39.4	.....	66	22	17	6	39	0.25	.....	0.15	T.	2	19	6	6	w.	R. M. Watson.
Truckee	Nevada	5,819	40	49.2	− 0.8	72	21†	30	6	34	T.	− 1.20	T.	T.	0	0	31	0	se.	Southern Pacific Co.

TABLE 1.—*Climatological data for May, 1911. District No. 10*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Nevada.																				
Austin	Lander	6,594	22	49.2[d]	− 1.9	74	5	20	5	54[d]	1.12	− 0.53	0.60	6.8	7	.....	.....	.....	n.	F. O. Booe.
Battle Mountain	do.	4,843	40	47.8	− 9.5	78	26	26	2	46	1.20	+ 0.43	0.90	0	2	22	2	7	sw.	Southern Pacific Co.
Beowawe	Eureka	4,905	40	51.6	− 6.4	90	22	25	26†	47	0.08	− 0.62	0.05	0	2	7	19	5	w.	Do.
Carlin	Elko	5,232	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Carson Dam	Churchill	4,032	4	53.7	.....	81	22	27	6	39	T.	.....	T.	T.	0	15	9	7	w.	U. S. Reclamation Service.
Cherry Creek	White Pine	6,450	3	50.6	.....	77	4†	23	27	42	0.38	.....	0.20	.5	3	9	14	8	w.	J. H. Leishman.
Clover Valley	Elko	6,000	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	I. F. Wiseman.
Cobre	do.	5,917	2	48.8[b]	.....	89[c]	11	20	5	68[c]	0.30	.....	0.30	3.0	1	30	1	0	sw.	Southern Pacific Co.
Columbia	Esmeralda	5,750	4	54.8	.....	80	22	26	10	40	0.13	.....	0.08	T.	3	19	11	1	se.	A. Booth.
Dutton	Elko	5,100	3	52.3	.....	80	4	20	5	50	.....	.....	.....	.....	.....	6	10	15	sw.	Golconda Cattle Co.
Elko	do.	5,342	40	50.4	− 3.6	84	4	22	11†	53	0.42	− 0.40	0.41	T.	2	10	10	11	s.	Southern Pacific Co.
Ely	White Pine	6,421	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. C. Hunting.
Eureka	Eureka	6,500	8	49.6	.....	77	22	24	6†	43	1.01	.....	0.35	3.8	6	8	10	13	n.	Clay Simms.
Fallon	Churchill	3,965	6	52.6	.....	83	4†	23	7	54	0.02	.....	0.02	0	1	13	13	5	nw.	U. S. Experiment Station.
Fernley	Lyon	4,200	38	51.2	− 7.4	84	21	22	10	54	T.	− 0.70	T.	T.	0	14	11	6	w.	Mrs. G. A. Steele.
Gardnerville	Douglas	4,830	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. Dangberg.
Glenbrook	do.	.....	2	41.9	.....	63	24	22	9	31	0.15	.....	0.15	1.5	1	26	1	4	sw.	C. C. Henningsen.
Golconda	Humboldt	4,697	32	50.3	− 6.3	81	4	25	10	44	0.35	− 0.70	0.35	0	2	13	7	11	nw.	Southern Pacific Co.
Halleck	Elko	5,631	18	47.9	− 4.2	83	4	18	10	48	0.63	− 0.44	0.50	T.	2	18	7	6	nw.	Do.
Jean	Clark	2,074	3	72.8	.....	93	21	56	25	32	0.00	.....	0.00	0	0	16	8	7	sw.	Salt Lake Route.
Lewers's ranch	Washoe	5,500	23	49.8	− 3.3	80	21	24	6†	44	0.70	− 0.83	0.35	T.	3	8	18	5	.....	Ross Lewers.
Lovelocks	Humboldt	3,977	17	52.0	− 8.0	81	4†	24	10†	50	0.18	− 0.14	0.12	0	3	7	20	4	s.	C. H. Allender.
Millett	Nye	.....	3	50.6	.....	80	23†	21	11	51	0.30	.....	0.25	0	2	18	8	5	s.	Fred J. Jones.
Mina	Esmeralda	4,000	4	56.0	.....	85	22	26	10	45	0.00	.....	0.00	0	0	17	5	9	nw.	Southern Pacific Co.
Potts	Nye	6,990	18	46.4	− 6.8	75	22	16	10	48	0.05	− 1.17	0.05	2.0	1	6	6	19	s.	Miss Mamie Potts.
Quinn River Ranch	Humboldt	4,850	9	49.2[c]	.....	79	21	24	10	49[c]	0.08	.....	0.08	0	1	.....	.....	.....	n.	F. M. Payne.
Reno	Washoe	4,532	40	50.0	− 3.6	80	21	25	6	44	0.32	− 0.47	0.19	T.	4	12	10	9	w.	U. S. Weather Bureau.
Soda Lake	Churchill	4,534	4	53.6	.....	81	4†	27	6	42	T.	.....	T.	T.	0	9	20	2	nw.	U. S. Reclamation Service.
Tecoma	Elko	4,812	33	47.2	− 8.0	78	5	17	11	56	0.60	− 0.34	0.60	0	2	11	5	15	n.	Southern Pacific Co.
Tonopah	Nye	6,090	4	51.6	.....	76	22	25	6	33	T.	.....	T.	T.	0	10	19	2	se.	U. S. Weather Bureau.
Wabuska	Lyon	4,347	8	51.4[c]	.....	89	22	18	9	54[c]	0.50	.....	0.50	0	1	.....	.....	.....	.....	Vic Bernard.
Wells	Elko	5,631	39	48.1	− 5.1	80	7	20	1†	53	0.99	+ 0.09	0.70	T.	7	8	10	13	sw.	Southern Pacific Co.
Winnemucca	Humboldt	4,432	32	50.8	− 3.6	80	4	26	10	43	0.42	− 0.61	0.31	T.	7	10	7	14	sw.	U. S. Weather Bureau.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 10, Great Basin.*

Stations.	River basins.	Day of month.																											Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Border	Bear			T.						T.					T.	.15			.45	.20							.65						1.45
Cokeville	do		T.	.07						T.					T.	.13			.33	.18						T.	.49	.05					1.25
Evanston	do									.35									.21	.05							.34			.12			1.07
Idaho.																																	
Geneva	Bear								.14											.12							.54						0.80
Grace	do									.12						.25											.62	.13	.02				1.14
Paris	do									.62						.15			.50	.05							.45						1.21
Stone	Deep Creek			.15						.15						.05			.03														0.38
Weston	Bear		.15							.15						.08	.05		.07								.48	.12					1.10
Utah.																																	
Alpine	Gr. S. Lake									.28										.43							.72						1.43
Beaver	Sevier Lake										.03				T.	.28		.02								T.	.11						0.44
Black Rock	do														T.																		T.
Burrville	do																																0.00
Castle Rock	Gr. S. Lake									.10						T.			.10	.08							.40	.10					0.78
Cedar City	Desert														.18	.17										.03							0.38
Center	do																									.08	.01						0.09
Corinne	Gr. S. Lake									T.					T.											1.06							1.06
Deseret	Sevier Lake														.05											.15							0.20
Enterprise	Gr. S. Lake														.27																		0.27
Fairfield	do									.05						T.											.65						0.70
Farmington	do															T.	T.		T.	T.						.51	.23						0.74
Fillmore	Sevier Lake									T.	.29															T.	.59						0.88
Frisco	Desert														T.	T.											.20						0.00
Garrison	do															.16											.39						0.20
Government Creek	do													.03	.06											.05	.12						0.55
Grantsville	Gr. S. Lake															.68			.08								T.	.06					0.26
Grouse Creek	Desert		.04	T.		T.					.10			T.	T.		.12			.36					.40	.10	.02						0.86
Heber	Gr. S. Lake																																1.10
Henefer	do		T.							.02	T.			T.	.01	.03	.01		.14	.07						T.	.30	.20		T.			0.78
Hooper	do		.30	.08																						.20	.20						0.78
Ibapah (near)	Desert										.45				.33											T.	.85			T.			1.63
Ibex	do																																
International	Gr. S. Lake										.28					.04											.98	.08					1.38
Iosepa	Desert									T.					T.	.20											.48						0.68
Kanosh	Sevier Lake										.22																.52						0.74
Kelton	Gr. S. Lake									.25						.20																	0.45
Lemay	Desert														T.	.12			T.														0.12
Levan	Sevier Lake									.18					T.											.25	.02						0.45
Logan	Gr. S. Lake		.12								.35					.12	.08		.25	.10							.36	.39					1.77
Lucin	Desert															.35			T.														0.35
Lund	do															.26											.03						0.29
Manti	Sevier Lake										.14			T.		T.				T.						T.	.25						0.39
Maple Creek	Gr. S. Lake									.02	.08			T.	T.				T.	.02							1.10	.25				T.	1.47
Marion	do									T.	.14					.04	T.	T.	T.	.19						T.	.67	.23					1.27
Marysvale	Sevier Lake								T.	T.	.01		T.	T.	T.	.06				T.						T.	T.						0.07
Meadowville	Gr. S. Lake									T.						T.			.50								.40	.25		T.			1.15
Mercur	do									.02					T.	.08	.01			.01						.01	.40	.02					0.55
Midlake	do															.12																	0.12
Milford	Sevier Lake									.05						T.																	0.05
Millville	Gr. S. Lake		.09							.20						.09	.18		.21	.11							.49	.28					1.65
Minersville	Sevier Lake															.11																	0.11
Modena	Desert														.04	T.										.02							0.06
Morgan	Gr. S. Lake																																
Moroni	Sevier Lake								T.	T.	.03			T.	T.	T.	T.	T.	T.	T.						T.	.34	T.				T.	0.37
Mount Nebo	Gr. S. Lake									T.	.06					T.											.20						0.26
Nephi (near)	do																																
New Castle	Desert														.34																		0.34
Oak City	Sevier Lake																																
Ogden	Gr. S. Lake																																
Park City	do										.04			.11				.02									.03						0.20
Park Valley	Desert										.01					.38	T.																0.39
Parowan	do															.18																	0.18
Payson	Gr. S. Lake									.24	.40					T.	T.			.08							.84	.09					1.65
Pelican Point	do									T.	.02					.09											.66						0.77
Pine Cliff Ranch	do										.37				.02				.07	.06							.37		.21				1.10
Pinto	Desert														.40																		0.40
Promontory	Gr. S. Lake													.14																			0.14
Provo	do									T.	T.									.20							1.40	T.					1.60
Randolph	do																																
Richfield	Sevier Lake																																
Saltair	Gr. S. Lake		.01							.06	.04					T.			.01	.04							.84	.23					1.23
Salt Lake City	do		.07						.01	.28	.16					T.			.07	.35						.32	.55	.03					1.84
Scipio	Desert															T.	T.	T.								T.							T.
Silver City	do															.15											.24						0.39
Spanish Fork	Gr. S. Lake										.12	.16				T.											1.24	T.					1.52
Strawberry Tunnel	do									T.	.26			T.	T.	.02	.12		T.	.50							.61	.14	T.				1.65
Thistle	do	T.	T.							T.	.43				T.					.05							.45						0.93
Tooele	do									T.	.21				T.	.07		.01	T.	T.						T.	.57						0.86
Utah L. Pmpg. Sta.	do									.30	.05					.02										T.	.58	T.					0.95
Whiskey Creek	Desert																										.35						0.35
Woodruff	Gr. S. Lake																																
Oregon.																																	
Ana River	SE. drainage		T.	.10					.10	.01			.03					.01	T.	.27					T.								0.52
Bear Valley	do														.50	.24	.25	.10	T.													T.	1.09
Burns	do	.02	.01	.03		.05					.10	.20														.22						.12	0.75
Burns Mill	do		.03		.11		.05			.11			.06	.12				.02	.02	.61	T.		.14			.40			T.	.03			1.70
Christmas Lake	do	.02	.01	.12		T.	T.		.08				.05	T.	.01			.08		.02							.02	T.				T.	0.41
Cliff	do	.04		.23		T.			.06	T.			.10	.02				.06		.13													0.64
Diamond	do					T.	T.		.08	T.			T.					.12	T.	.15	T.						.20					T.	0.55
Embody	do	T.	T.	.03	T.			T.	.04	T.				T.					.10	.30													0.47
Fort Rock	do		.05						.06				.05	.08				.15	.14													.03	0.76
Paisley	do													T.				10	T.	T.							T.	T.					0.16
Seneca	do			.15		.06				.14			.15					.18		.17					.10							.04	0.99
Silver Lake	do		.10	.20		.05			.08				.10	.02	.02			.10	T.	.15												T.	0.82
Valley Falls	do																																

TABLE 2.—*Daily precipitation for May, 1911. District No. 10*—Continued.

Stations.	River basins.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
California.																																	
Bijou	Truckee					.54		.07						.40																.08	.12		1.21
Boca	do																																
Deer Park	do		.13		*	.53	.07	.21	.16	.01				.02	.01		.03	.07	.22										.02	.17	.01	1.66
Glen Alpine	do		.10			.30		.50						.15	.10			.02											.20		1.37
Hobart Mills	do					.15	.02		.01	.02					.10		.01		.04										.10		.04	0.49
Lundy	East Walker						*	.50								T.													T.			0.50
McKinney	Truckee		.05			.40	.02	.12	.04								.02	.01	.02										.18	.15		1.01
Markleeville	East Carson									.07					T.								.09	T.	.03	.07			T.	T.		0.26
Shields's ranch	East Walker														T.														T.	.30	.09	.10	0.49
Silver Creek	East Carson										.04				.05								.10						.03				0.22
Tahoe	Truckee					.15		.10		T.			T.			T.	T.	T.	T.											T.	T.	T.	0.25
Tallac	do		T.			.25		T.						T.	.10			T.											T.	.25		0.00
Truckee	do					T.				T.				T.		*																T.
Woodfords	West Carson														T.														.05	.05	.15		
Nevada.																																	
Arthur	Humboldt														*	1.00										.10	.04						1.14
Austin	Reese					.05									.40	.60									.01		.03		.02		.01		1.12
Battle Mountain	Humboldt											.30			.90																		1.20
Beowawe	do					.05									.03																		0.08
Bishop	do					T.	T.			T.					.36	.70	.09	T.	T.					.05	.10	.09	.10			T.			1.49
Carlin	do																																
Carson Dam	Carson									T.																					T.	T.	
Cherry Creek	Humboldt														.20											.03	.15						0.38
Clover Valley	do																																
Cobre	do														.30																		0.30
Columbia	Desert														.08	.03										.02							0.13
Dry Farm	Humboldt		.08			.21									.84				.05					.01		.11	.10						1.19
Dutton	do																																
Elko	do	T.				T.				T.					T.	.41	T.		.01	T.						T.				T.			0.42
Ely	do																																
Eureka	do									.02					.10	.25										.35	.25			.04			1.01
Fallon	Carson							T.		T.					T.															T.	T.	.02	0.02
Fernley	Truckee									T.																				T.	T.	T.	T.
Gardnerville	Carson																																
Glenbrook	Truckee					.15																											0.15
Golconda	Humboldt					T.									*	.35																	0.35
Halleck	do	T.				T.									.50										.13		T.						0.63
Jean	Desert																																
Lewer's Ranch	Truckee					T.	T.		.20																						.35	.15	0.70
Lovelocks	Humboldt					T.																									.12	.01	.05	0.18
Massacre Lakes	Desert																																
Mill City	Humboldt						.05								.12																.10		0.27
Millett	Reese														.05	.25														T.		T.	0.30
Mina	Desert																													T.			T.
North Fork	Humboldt															.50			.01				.03				T.						0.54
Potts	Reese															.05																	0.05
Quinn River Ranch	Humboldt															T.	T.															.08	0.08
Reno	Truckee					T.		T.		.03				T.	T.															.03	.09	.17	0.32
Rose Creek	Humboldt					.37										.30																.10	0.77
Skelton	do					.10									*	.53										.30	.27						1.20
Smith	West Walker														T.															.02	.01	T.	0.03
Spooner's Ranch	Truckee																																
Soda Lake	Carson							T.		T.					T.															T.	T.	T.	T.
Tecoma	Humboldt														*	.60																	0.60
Tonopah	Desert															T.										T.				T.	T.	T.	
Wabuska	Walker														T.															T.	.50	0.50	
Wells	Humboldt														.70	.01			.03					.10	.07	.05	.03						0.99
Willow Point	Little Humboldt.															.04														T.			0.04
Winnemucca	Humboldt					.01		T.		T.				T.	.22	.09			.01				T.				.01			.05	.03	T.	0.42

* Precipitation included in that of next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 10, Great Basin.*

Date.	Wyoming.						Utah.																			
	Border.		Evanston		Weston.		Corinne.		Deseret.		Government Creek.		Ibapah.		Marysvale.		Meadowville.		Modena.		Ogden.		Parowan.		Proro.		Salt Lake City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	58	26	54	25	59	29	72	34	70	31	56	34	.....	16	69	26	56	30	66	28	.....	.....	74	29	72	31	65	40
2	56	25	55	34	62	41	70	45	73	43	66	35	.....	21	69	26	60	38	70	36	.....	.....	77	31	72	46	63	48
3	64	32	62	34	69	41	72	48	78	41	72	46	.....	24	76	34	66	37	72	39	.....	.....	78	32	80	39	70	50
4	75	32	73	34	78	38	86	44	83	43	80	44	.....	19	84	33	70	39	76	38	.....	.....	80	34	86	39	82	51
5	78	35	74	37	81	40	80	40	83	45	82	44	.....	22	79	39	80	39	75	35	.....	.....	80	38	87	41	83	55
6	70	34	65	34	75	37	73	42	65	45	70	40	.....	27	72	47	70	40	69	42	.....	.....	78	39	74	45	56	46
7	70	22	70	22	69	25	68	40	75	32	74	30	.....	33	78	29	72	25	73	35	.....	.....	77	41	80	30	69	41
8	73	36	69	44	76	41	66	36	79	45	78	50	.....	42	70	46	76	45	73	39	.....	.....	77	42	82	51	78	54
9	66	38	62	33	60	36	56	35	65	40	74	37	.....	41	68	47	64	40	66	39	.....	.....	76	43	75	42	54	36
10	49	28	43	20	55	30	50	28	58	30	55	27	.....	37	55	30	51	28	57	30	.....	.....	77	40	59	30	53	32
11	60	19	58	23	65	23	46	20	70	25	70	31	.....	36	72	21	64	30	66	24	.....	.....	77	37	74	26	67	39
12	70	23	66	28	73	28	49	30	78	35	75	40	.....	38	70	30	72	25	72	28	.....	.....	70	34	84	30	76	46
13	68	32	65	42	74	39	82	27	76	45	74	45	.....	40	74	38	71	43	69	36	.....	.....	75	32	81	38	73	57
14	70	45	67	34	75	38	73	32	71	41	61	42	.....	33	69	32	76	40	64	38	.....	.....	76	30	78	42	75	53
15	60	37	60	35	64	43	68	28	58	37	59	35	.....	35	56	32	63	38	53	33	.....	.....	76	30	66	38	59	44
16	60	38	57	36	66	42	78	45	60	37	65	38	.....	38	72	26	65	38	64	28	.....	.....	75	29	77	39	68	50
17	59	36	58	35	62	36	69	42	76	40	70	43	50	41	65	19	63	39	66	43	.....	.....	74	32	69	45	64	49
18	45	32	56	32	58	39	72	45	65	42	66	47	56	45	74	46	49	32	74	43	.....	.....	73	37	71	47	63	42
19	45	29	44	26	57	37	59	37	59	34	54	35	57	43	53	35	49	32	60	35	.....	.....	77	39	54	33	53	33
20	53	28	53	23	63	30	70	36	67	27	50	28	63	43	63	27	55	29	66	35	.....	.....	78	40	65	28	59	38
21	54	25	64	24	67	28	68	34	73	29	69	39	67	47	71	24	63	28	71	29	.....	.....	79	36	74	27	65	42
22	70	33	66	31	74	38	81	33	81	35	76	40	65	40	81	28	72	38	79	34	.....	.....	80	32	79	33	77	45
23	75	39	74	34	77	44	87	50	82	50	80	53	67	41	81	48	79	42	76	40	.....	.....	76	45	87	47	80	55
24	71	45	66	49	76	44	85	50	79	54	78	48	64	43	74	56	74	49	71	51	.....	.....	79	36	84	64	79	64
25	69	34	65	37	69	37	82	46	73	45	70	49	55	36	72	44	72	35	66	37	.....	.....	70	34	79	51	68	41
26	61	35	53	29	54	32	61	38	61	35	53	32	38	12	59	34	60	33	62	30	.....	.....	80	35	58	32	54	35
27	51	31	49	28	55	33	72	36	64	30	58	29	40	15	69	26	52	30	68	34	.....	.....	79	40	62	35	57	38
28	61	24	62	24	67	28	73	40	75	36	67	31	57	21	76	33	59	28	72	39	.....	.....	73	38	71	32	67	41
29	68	40	64	34	73	40	82	35	78	55	72	36	65	32	78	34	58	35	71	36	.....	.....	72	42	76	42	72	52
30	76	30	74	34	80	35	88	45	82	43	80	44	65	32	80	31	72	34	73	32	.....	.....	76	32	87	39	85	56
31	80	37	75	38	80	40	86	48	80	40	78	45	67	35	79	33	81	39	70	33	.....	.....	70	40	84	43	83	58
Mns.	63.8	32.3	62.0	32.0	68.2	35.9	71.7	38.4	72.2	39.0	68.8	39.3	.....	33.2	71.2	34.0	65.6	35.4	68.7	35.5	.....	.....	76.1	36.1	75.1	38.9	68.3	46.2

Date.	Nevada.																									
	Burns, Oreg.		Elko.		Ely.		Eureka.		Fallon.		Jean.		Lovelocks.		Millett.		Mina.		Quinn River ranch.		Reno.		Tecoma.		Tonopah.		Winnemucca.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	58	34	66	26	.....	.....	64	31	67	36	83	60	67	33	68	30	66	35	61	31	57	39	64	28	62	43	63	34
2	64	32	69	29	.....	.....	68	29	68	35	83	63	69	34	62	30	72	38	64	40	61	34	64	26	64	39	66	35
3	69	35	73	35	.....	.....	72	34	72	35	.....	.....	74	33	74	34	79	39	70	37	69	35	70	28	69	42	70	37
4	72	30	84	38	.....	.....	76	43	83	29	89	64	81	39	77	31	84	43	75	42	72	39	74	35	71	49	80	44
5	60	29	74	40	.....	.....	71	40	62	51	87	65	67	42	71	44	83	48	65	41	56	33	78	36	65	32	62	32
6	54	17	62	28	.....	.....	58	24	61	25	80	62	61	28	66	29	62	32	60	23	61	25	60	26	57	25	59	27
7	58	26	75	23	.....	.....	71	29	74	23	87	65	70	29	75	24	75	32	65	28	67	32	70	28	69	43	69	33
8	62	24	64	34	.....	.....	69	35	69	41	88	64	65	35	73	30	68	44	63	35	58	40	70	34	69	40	63	37
9	65	30	58	27	.....	.....	65	32	57	28	75	68	56	28	55	32	68	35	57	31	54	31	52	30	47	29	53	29
10	67	32	68	24	.....	.....	65	26	67	26	82	58	74	24	70	20	70	26	64	24	65	27	58	22	59	31	64	26
11	65	24	75	22	.....	.....	70	29	74	31	78	62	73	24	72	21	75	34	70	26	73	34	66	17	66	42	72	33
12	60	28	73	26	.....	.....	72	43	74	35	78	68	72	26	74	28	77	36	63	36	66	41	74	18	70	47	71	33
13	56	30	65	32	.....	.....	68	34	69	32	78	60	67	30	70	42	74	36	55	35	53	38	72	26	67	38	56	34
14	59	25	65	35	.....	.....	61	31	55	41	70	60	59	40	59	35	59	38	59	35	51	35	62	28	50	32	60	38
15	56	30	54	35	.....	.....	53	32	68	42	79	58	65	44	60	33	67	39	65	39	56	41	50	35	58	31	62	41
16	54	28	58	30	.....	.....	62	36	65	33	80	62	62	34	65	35	74	36	58	39	53	42	64	26	61	39	57	38
17	52	33	63	40	.....	.....	64	33	66	33	84	68	65	33	70	26	77	50	53	33	56	38	62	32	63	37	59	32
18	52	28	60	34	.....	.....	62	37	66	45	80	65	60	42	68	47	76	52	57	39	54	36	54	32	71	40	58	38
19	59	28	60	33	.....	.....	55	28	63	32	80	59	62	28	59	34	67	40	63	33	60	32	56	28	57	31	60	33
20	56	30	70	23	.....	.....	66	24	73	30	87	63	73	31	70	24	74	33	70	25	73	37	66	20	64	38	68	32
21	62	33	78	29	.....	.....	75	32	81	34	93	61	80	32	77	30	83	38	79	30	80	36	74	32	73	46	77	34
22	60	32	79	36	.....	.....	77	42	83	45	89	65	81	41	80	33	85	41	77	43	78	46	76	34	76	55	80	40
23	58	30	76	40	.....	.....	76	43	79	50	83	72	79	50	80	39	83	55	75	40	70	49	76	35	72	52	75	45
24	54	20	72	47	.....	.....	68	45	68	43	79	67	69	41	71	42	78	54	61	38	56	35	68	36	62	42	62	44
25	57	30	60	39	.....	.....	57	29	61	40	79	56	61	38	59	40	69	37	63	31	60	30	52	35	48	30	60	37
26	68	33	52	24	.....	.....	50	28	62	38	82	62	60	38	60	33	62	35	58	36	62	38	54	22	57	36	58	33
27	65	32	67	22	.....	.....	61	24	67	31	83	72	67	27	65	23	69	33	64	26	67	32	62	25	60	38	63	26
28	70	33	73	30	.....	.....	67	29	75	35	86	60	74	40	70	30	69	33	74	29	72	35	66	28	68	44	73	37
29	69	34	73	40	.....	.....	69	33	73	48	84	71	72	51	70	42	72	45	.....	.....	72	44	72	28	66	50	77	44
30	76	36	76	38	.....	.....	71	37	72	41	82	62	69	45	70	34	75	38	.....	.....	66	41	76	32	64	48	75	43
31	78	43	81	38	.....	.....	69	35	71	41	80	60	73	43	68	32	68	46	.....	.....	68	39	72	35	61	44	69	41
Mns.	61.8	30.0	68.5	32 2	.....	.....	66.2	33.1	68.9	36.4	[a]82.3	[a]63.3	68.5	35.6	68.6	32.5	72.6	39.4	[a]64.6	[a]33.8	63.4	36.6	65.6	28.9	63.6	39.7	65.8	35.8

[a], [b], [c], etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT NO. 11, CALIFORNIA.

Prof. ALEXANDER G. MCADIE, District Editor.

GENERAL SUMMARY.

May was a cold month. With one exception it was the coldest on record. In fact the entire spring has been noticeably cold. The cool spell has not, however, been accompanied, as is usually the case, with an excess of precipitation. On the contrary, both the rainfall and snowfall for April and May have been below the normal. The late winter and early spring months, however, were marked by heavy precipitation. There were no extreme temperatures reported and the month, as a whole, was one unmarked by noteworthy features, except as regards the continued cold. In the interior of the State the days were moderately warm and the nights pleasant, while along the coast both days and nights were cool. There was more fog and cloudiness than usual in both sections. Ordinarily May in California is a warm month, corresponding to midsummer months in other sections; but this year May in California resembled more a late spring month on the middle Atlantic coast. The month began with light rain in the northern coast counties and moderate southerly winds. In the central and southern counties the weather remained fair. Unsettled conditions existed until the 5th, when rain was general throughout the State. Then followed a period of fair weather with the usual high northwest wind on the coast from Point Reyes to Cape Mendocino. From the 15th to the 18th the weather was unsettled, caused by the slow development of a depression in the Great Basin. Light rains were reported in many parts of the State. Then followed a period of about four days when, under the influence of an area of high pressure over the North Pacific, the weather was generally fair and temperatures seasonable. Nothing of importance occurred during the rest of the month, except that the 30th and 31st were showery days; and light thunderstorms occurred in the Sierra and certain localities in the foothills.

Ordinarily the hills are brown before the end of May, but this year the hills remained green until the end of the month notwithstanding the comparative dryness of both April and May. The snow cover diminished steadily and most of the streams ran bank full. It is probable that if any great storm had occurred during the month there would have been disastrous floods; but as none such occurred and the melting of the snow was at a uniform rate, the month passed without any interference with traffic and little if any damage to fields and crops by high waters. The water supply was abundant and no complaints have been heard regarding prospective shortage of water. In this respect the month was just the opposite of May, 1910, when the rivers all carried less water than the normal flow and it was reasonably certain that during the summer months there would be less water available for mining, power, and irrigation purposes than would be needed.

The usual high northwest summer winds from San Francisco Bay to Humboldt Bay were less prevalent this month. There were a few days when these were reported; but taking the month as a whole there was not 50 per cent of the usual number of hours of high winds, and no extreme velocities were reported.

Compared with other Mays the month was not unlike May, 1910, in that the precipitation for both months was small, but was quite unlike it in the matter of temperature. For example, Memorial Day, 1910, was the hottest day of the year, with temperatures ranging from 90° at coast stations to 120° in the desert section; while this year on the same date temperatures ranged from 50° to 75°. There was more cloudiness this year than last. Frosts were few and did no damage. From an agricultural standpoint, weather conditions were very good, the crops making slow but steady growth. The season, however, is late and yields do not promise to be excessive. The year thus far perhaps most resembles 1899.

TEMPERATURE.

The mean temperature for the State was 3.2° below the normal. The following table gives the mean temperature for California during the time for which such records have been kept:

Year.	Mean.	Departures.	Year.	Mean.	Departures.
	F°.	F°.		F°.	F°.
1897	66.9	+5.4	1905	59.6	−1.5
1898	61.3	−0.2	1906	59.8	−1.3
1899	59.9	−1.6	1907	61.5	0.0
1900	64.0	+2.5	1908	58.0	−3.5
1901	62.0	+0.5	1909	60.4	−1.1
1902	60.8	−0.7	1910	65.5	+4.0
1903	63.5	+2.0	1911	58.3	−3.2
1904	64.9	+3.4			

The highest mean temperature was 77.8° at Needles, and nearly all the stations in the Salton Desert had mean temperatures for the month exceeding 75°. In May, 1910, the mean monthly temperature at Needles was 84.6° and the general mean for that section exceeded 80°. This, perhaps, gives the best estimate of the difference in temperature in the two months and shows how cool the present month has been. The lowest mean temperature was 32.5° at Tamarack, whereas during May, 1910, the mean temperature at that station was 41.4°. The natural inference is that the day temperatures were not so high as they usually are, and on the other hand the night temperatures were not so low. The highest temperature of the month occurred on the 22d at Heber, 104°. During May, 1910, a temperature of 121° was recorded at several points, and temperatures above 110° occurred generally in northern as well as southern counties. The lowest temperature occurred on the 4th at Tamarack, 11°. The lowest temperature in May, 1910, was 6°, and occurred at Tamarack on the 5th.

PRECIPITATION.

The average monthly precipitation for California for May is as follows:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	Inches.	*Inches.*		*Inches.*	*Inches.*
1897	0.18	−1.16	1905	2.18	+ .84
1898	1.56	+0.22	1906	3.19	+1.85
1899	0.73	−0.61	1907	.57	−0.77
1900	1.39	+0.05	1908	1.63	+ .29
1901	1.03	−0.31	1909	.23	−1.11
1902	0.84	−0.50	1910	.18	−1.16
1903	0.14	−1.20	1911	.72	−0.62
1904	0.22	−1.12			

The greatest 24-hour precipitation was 1.65 inches at Weitchpec, and the greatest monthly amount was 6.78 inches, also at Weitchpec. There was practically no rain in the southern counties.

SUNSHINE.

The following table gives the total hours of sunshine and percentages of possible:

Stations.	Hours.	Per cent of possible.	Stations.	Hours.	Per cent of possible.
Eureka	187	42	Sacramento	288	66
Fresno	394	90	San Diego	.....	.....
Los Angeles	304	70	San Francisco	257	58
Mount Tamalpais	309	70	San Jose	343	78
Red Bluff	325	73	San Luis Obispo	259	59

There was less sunshine at the coast stations than usually occurs in May. At San Francisco, for example, the percentage was lower than in any year since 1891.

LOCAL STORMS.

May 23, a windstorm early in the morning did considerable damage to fruit and vegetation in the San Joaquin Valley. At Stockton signs were blown down and it became necessary to shut off the electric current used for lighting. A fire wall on San Joaquin Street was blown down and two persons slightly injured.

In Sacramento the wind reached a velocity of 40 miles an hour from the south, but aside from dust carried by the high wind and the blowing down of signs not properly fastened there was no damage done.

NOTES ON THE RIVERS OF THE SACRAMENTO AND SAN JOAQUIN WATERSHEDS FOR MAY, 1911.

By N. R. TAYLOR, Local Forecaster.

The Sacramento watershed.—The rivers of this watershed were exceptionally high during the entire month, with but little difference between the highest and lowest stages.

At the close of April the snow fields of the high Sierra were unusually extensive, and well-packed snow ranging in depth from 5 to over 10 feet was general above the 5,500-foot level. The slow melting of this snow during May caused a continuation of high stages in all of the larger streams, but kept the smaller mountain watercourses below the danger point. No freshets were reported from any section of the Sacramento Valley during the month.

In the Sacramento River above Redding there was little departure from the stages usually maintained during the month in question; but from Red Bluff to the mouth of the river this stream averaged from 1 foot to over 2 feet above the normal for the month. At Red Bluff, Colusa, Knights Landing, and Sacramento City the river averaged 1.2, 2.2, 2.1, and 1.7 feet, respectively, above the normal stages, and at all these points the river was higher than during any May since that of 1907.

The San Joaquin watershed.—All streams in this watershed carried more than the usual amount of water. At Firebaugh, on the San Joaquin, the river averaged higher than for any May since that of 1907, and at Melones, on the Stanislaus, the average stage of the river was the highest ever known for any month since the records have been kept.

PROTECTION AGAINST FROST—FROST CANDLES.

By A. G. MCADIE.

In an effort to improve upon present frost-fighting apparatus there has been devised at the San Francisco Weather Bureau office an inexpensive frost candle. It has also been called a frost cartridge, because of a fancied resemblance to a large cartridge. The device consists of two portions, the lower or cartridge proper, and an upper metallic screen or cover. The cartridge consists of a cardboard or stiff paper tube of suitable dimensions filled with combustible material. In actual practice, mailing tubes, about 12 inches long and 1½ inches in diameter, are used for the smaller size. For the larger size the dimensions may be doubled. The tube is filled with cotton waste or other suitable wicking and either crude oil or distillate. A stopper is provided for the lower end, but with a little experience the cotton waste may be so packed as to prevent any leakage of oil. A projecting end of the cotton waste serves as a ready means of lighting.

About 6 inches above the cartridge is a metallic cover, which is simply a sheet of thin metal, iron or tin, 20 inches long and 14 inches wide, cut along diagonal lines at each corner about 3½ inches. The ends are then bent downward making an inverted pan, the sides of which flare outward. The purpose of the inverted pan is to catch and hold a certain amount of the heated air rising from the burning end of the cartridge. It also serves to catch and hold the soot particles as they rise in the smoke. In burning crude oil the carbon is very noticeable and some means is necessary to prevent its settling on the fruit. The cover becoming heated will retain its heat longer than a screen of different shape, owing to its box-like character. Moreover the top surface, metallic, will radiate heat upward to the fruit a few inches above. This heat is preferable to the convectional heat from the naked flame, as it will not scorch or singe the boughs, leaves, or fruit.

The cartridge is held in place by a series of small loops made of wire, fastened to the edge of the cover. Three of these holding loops are sufficient. The whole device, cartridge and cover, is hung under the tree, suspended from a bough by one or more wire hooks. The distance from the bough can be varied at will from a few inches to several feet. Preferably about 4 inches below the bough will answer.

The cartridges may be filled during the afternoon hours and set in their cradles. When the temperature falls to the danger point a man can pass through the orchard and with a small, flaming torch rapidly light the upper ends of the cartridges, which should burn gradually and

completely, the entire cartridge being consumed. Tests made at San Francisco show that the cartridges will burn for about three hours.

One great advantage of the device is that the heat can be applied where most needed, namely, as close to the fruit as possible, and there is no heat wasted in warming up all out-of-doors. The method is cleaner than any ordinary uncovered system using crude oil, as the objectionable soot particles are in large measure deposited on the inner side of the cover. If the outer surface becomes black no harm is done, as, other things being equal, a black surface radiates heat better than other surfaces.

The covers remain in place until danger of fros is passed. They can then be stacked so as to occupy but little space.

FIGHTING FROST.

By Mr. J. E. ADAMSON, of Pomona, Cal.

The possibility of saving fruit crops from frost damage is simply a question of energy intelligently applied.

In our experiments in this work it was soon realized that success depends largely on two things, viz, early lighting to blanket the earth and conserve the latent heat, and the subdivision of the fuel into many fires to offset the fact that the horizontal radiation from fires in the open is very slight.

In regard to conservation, we have found that on nights of low relative humidity the earth will begin to crust over at about 28° F., therefore it was decided to assume 30° F. as a desirable point to begin firing. The wisdom of this has been fully proven this past season by the ease with which temperatures were maintained, as compared with other seasons when we waited longer before lighting. My own practice was to get out at 30° F. and light fires to windward of about each 15 rows of trees, and then watch for any tendency to drop to lower temperatures under the blanket of smoke, lighting additional fires to prevent any drop below 28° F.

My grove lies in a very difficult position for easy work. Being sheltered by a low range of hills, we are sometimes in a dead calm while districts not far distant are under the influence of a strong desert wind. Then, as the rows of trees are at a considerable angle to the prevailing drift on frosty nights, I find it necessary to light the north and east sides to secure a good covering of smoke.

Comparing the fall of temperature under the smudge with that in the open to windward, it would seem that the smudge delayed the fall at least two hours, after which it will be found necessary to light more fires to hold the temperature. I had no trouble holding 30° in the fire zone, while it fell to 22° at a point 200 feet to windward, with 900 fires to 1,000 trees.

The fact that it was necessary to go so far to windward to find the minimum temperature accounts for the fact that so many investigations seem to show only 2° or 3° gain of temperature in the fire zone. This is easily accounted for by the increase in air circulation, caused by the heat rising from the fires, producing a gentle but effective air mixture.

The question of subdivision of fires has been provided for by using 1 gallon of oil for seven to eight hours burning. The value of the subdivision will be seen from a simple comparison. If we have 100 trees planted 20 feet apart we would have a square 200 feet on each side. Now, if 100 gallons of oil were burned in one fire there would be intense heat close to the fire, but as the radiation is very slight horizontally, there would be found very little effect beyond 30 feet, while if the oil were divided into 100 fires (one to each tree) there would be no great heat at any one point, but it would be distributed over the whole tract.

One desirable point in firing devices is a regular rate of burning from start to finish, a condition not met in any burner which has come to the notice of the writer. To get the desired result it is easily seen that the oil must be at a uniform distance from the rim of the container.

Working along this line, we conceived the idea of using a paper container and, as finally put into practice in the season of 1909–10, a heavy paper bag, known to the grocery trade as "No. 4 sugar," was used. Filled with crude oil the bag was fired by dropping in a small quantity of burning distillate. The bag and contents burned down very regular and gave excellent results.

Several thousand were used that season, the cost being $3.50 per 1,000; but their use was discontinued for the reason that it was found difficult to get a bag without a leak in the seam where the bag is folded.

The work of the past season was carried on with different types of metal pots, using slop distillate. The frost periods this season were not severe or protracted, but just enough came to prove the value of the work.

I have lemon trees full of fruit that went through the frost as small fruit, while groves in the immediate neighborhood have no small fruit.

Summing up the results of our work, I would say that the most important part is not the saving of the fruit or trees this season, but the feeling of satisfaction coming from the fact that we realize the fight can be carried out along definite lines. The principles involved are three, viz, blanketing to minimize radiation; heating to offset radiation; and air mixing, caused by the increased circulation due to the heated air rising.

TABLE 1.—*Climatological data for May, 1911. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																			
Klamath Agency	Klamath	4,169	3	50.6	.....	77	30	29	1†	43	0.13	.....	0.05	1.3	3	18	7	6	s.	Edson C. Watson.
Klamath Falls	do	4,100	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Heileman.
Lakeview	Lake	4,825	28	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bert Rice.
Merrill	Klamath	4,070	5	47.4	.....	80	30	22	9	44	0.78	.....	0.28	0	5	15	2	14	.....	Mrs. Agnes Ritchson.
Yonna	do	4,146	4	.....	.....	79	21	.....	.....	.....	0.67	.....	0.18	0	6	4	22	5	w.	Jacob Ruecke.
California.																				
Alameda	Alameda	.....	1	59.8	.....	88	21	44	24	34	0.21	.....	0.20	0	2	17	11	3	nw.	Chas. E. Sears.
Alturas	Modoc	4,460	7	48.3	.....	82	21	19	6	53	0.59	.....	0.20	2.5	7	11	16	4	sw.	Prof. C. B. Towle.
Angiola	Tulare	208	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Antioch	Contra Costa	46	32	62.6	− 3.5	88	21	50	3	....	0.16	− 0.33	0.09	0	2	.....	.....	.....	.....	Southern Pacific Co.
Aptos	Santa Cruz	102	26	59.0	+ 0.2	82	21	38	1	....	0.20	− 0.82	0.20	0	1	14	8	9	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	2	59.0	.....	91	21	35	14†	48	0.82	.....	0.46	0	3	.....	.....	.....	.....	Dr. F. Soegaard.
Auburn	Placer	1,360	40	57.8	− 4.9	88	22	35	26	36	0.42	− 1.14	0.26	0	3	22	3	6	.....	Southern Pacific Co.
Avalon	Los Angeles	.....	1	59.2	.....	79	22	49	1†	21	0.00	.....	0.00	0	0	31	0	0	w.	T. S. Manning.
Azusa	do	540	9	64.4	.....	103	21	38	1	54	0.81	− 0.21	0.81	0	1	26	3	2	sw.	A. P. Griffith.
Bagdad	San Bernardino	784	8	82.7	.....	102	23†	58	15	32	0.00	.....	0.00	0	0	.....	.....	.....	.....	Santa Fe Co.
Bakersfield	Kern	404	22	61.7	−11.2	96	22	48	6†	39	0.00	− 0.18	0.00	0	0	.....	.....	.....	.....	Do.
Barstow	San Bernardino	2,105	8	67.6	.....	95	4	39	10	49	0.02	− 0.01	0.02	0	1	17	13	1	w.	E. L. White.
Berkeley	Alameda	317	24	57.2	− 0.1	86	20	42	24	30	0.27	− 0.94	0.16	0	2	16	5	10	n.	State University.
Biggs	Butte	98	12	67.0	+ 1.0	98	21†	45	6	....	T.	− 1.06	T.	0	0	18	0	13	n.	Southern Pacific Co.
Bishop	Inyo	4,450	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Chalfant.
Bishop Creek	do	8,500	1	43.4	.....	66	22	22	15	28	1.75	.....	1.05	17.5	3	18	0	13	sw.	Paul E. Lodge.
Blocksburg	Humboldt	1,700	5	51.6	.....	84	20	29	6	46	4.37	.....	1.04	0	9	5	11	15	se.	Victor Hope.
Blue Canon	Placer	4,695	12	49.4	− 3.5	73	22	25	10	31	1.52	− 2.23	0.90	3.0	5	16	7	8	.....	Southern Pacific Co.
Blythe	Riverside	.....	2	70.1	.....	100	23	40	16	52	0.00	.....	0.00	0	0	24	7	0	sw.	Ray W. Ward.
Branscomb	Mendocino	2,000	11	50.4	.....	84	21	29	6	43	5.72	+ 2.11	1.40	0	8	16	10	5	n.	A. J. Haun.
Brawley	Imperial	−105	2	74.0	.....	101	22	51	2†	46	0.00	.....	0.00	0	0	.....	.....	.....	.....	M. D. Witter.
Brush Creek	Butte	2,140	7	57.2	.....	89	24	32	29	50	1.38	.....	0.81	0	5	13	0	18	s.	Cal. Gas & Electric Co.
Burney	Shasta	3,300	1	50.0	.....	80	20†	25	6	45	1.46	.....	0.70	T.	3	10	11	10	nw.	Mrs. M. D. Chambers.
Calexico	Imperial	0	6	75.8	.....	103	22	52	2	40	0.00	.....	0.00	0	0	29	0	2	se.	J. E. Peck.
Caliente	Kern	1,200	35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Calistoga	Napa	363	39	56.2	− 5.3	90	25	40	26†	....	0.42	− 0.72	0.17	0	4	20	0	11	w.	Do.
Campbell	Santa Clara	217	14	54.7	− 2.9	88	21	34	8	45	0.42	− 0.14	0.20	0	3	16	6	9	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	4	56.2	.....	89	27	26	2	40	2.08	.....	0.86	0	8	11	10	10	.....	Cal. Gas & Electric Co.
Cedarville	Modoc	4,675	17	48.6	− 3.3	77	21	27	6	37	1.03	− 0.57	0.30	2.5	7	12	19	0	sw.	T. H. Johnstone.
Chico	Butte	189	41	61.4	− 7.0	93	21	36	25	46	0.17	− 0.79	0.10	0	4	21	2	8	s.	G. H. Stephenson.
China Flat	Humboldt	600	2	59.6	.....	91	29	39	11†	45	2.91	.....	0.83	0	8	16	3	12	sw.	O. I. Westerburg.
Chino	San Bernardino	714	19	69.3	+ 4.6	96	23	52	2†	....	0.05	− 0.28	0.05	0	1	22	8	1	e.	Southern Pacific Co.
Cisco	Placer	5,939	40	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Claremont	Los Angeles	1,200	19	61.0	+ 0.3	95	21	39	1	44	1.08	+ 0.08	0.97	0	3	23	7	1	w.	F. P. Brackett.
Cloverdale	Sonoma	340	8	58.2	.....	90	21	37	6†	42	0.83	.....	0.24	0	4	23	0	8	n.	John O. Ogle.
Colfax	Placer	2,421	40	53.6	− 7.6	81	22	33	24	33	1.16	− 1.23	0.49	0	4	18	0	13	n.	Southern Pacific Co.
Colusa	Colusa	60	8	61.6	.....	87	21	40	6	34	0.31	− 0.30	0.11	0	5	19	4	8	n.	C. D. McCormish.
Corning	Tehama	277	25	69.5	+ 1.3	90	21	50	1	....	0.24	− 0.69	0.24	0	1	7	16	8	s.	Southern Pacific Co.
Cuyamaca	San Diego	4,677	12	52.8	+ 3.3	76	22	33	25	31	T.	− 1.84	T.	0	0	22	5	4	e.	L. L. Macquarie.
Daunt	Tulare	4,000	4	52.0	.....	81	22	32	10†	38	0.19	.....	0.19	0	1	14	7	10	.....	D. L. Wishon.
Davisville	Yolo	51	39	59.0	− 8.9	91	21	32	6	47	T.	− 0.68	T.	0	0	16	12	3	s.	S. H. Beckett.
Deer Creek	Nevada	3,700	4	48.0	.....	76	21†	27	6†	37	2.62	.....	0.97	1.5	8	16	6	9	w.	Cal. Gas & Electric Co.
Del Monte	Monterey	.....	.....	58.2	.....	85	21	44	7	34	0.46	.....	0.28	0	3	19	6	6	n.	H. R. Warner.
Delta	Shasta	1,138	26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Denair	Stanislaus	126	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Dobbins (near)	Yuba	1,650	7	60.4	.....	86	20†	40	6†	36	1.18	.....	0.72	0	4	12	16	3	s.	Cal. Gas & Elec. Co.
Dudleys	Mariposa	3,000	2	51.2	.....	83	23	28	6†	41	0.71	.....	0.57	1.0	3	21	3	7	nw.	W. H. Dudley.
Dunnigan	Yolo	65	34	69.4	− 0.9	88	22	56	1	....	0.15	− 0.79	0.15	0	1	22	5	4	n.	Southern Pacific Co.
Dunsmuir	Siskiyou	2,285	22	57.1	− 0.4	95	21	40	5	....	4.04	+ 0.32	1.11	0	8	18	0	13	n.	Do.
Durham	Butte	160	16	61.4	− 1.8	89	20†	35	6†	43	0.17	− 1.04	0.17	0	1	20	7	4	s.	R. W. Durham.
El Cajon	San Diego	482	12	61.6	− 0.8	94	21	40	2	51	0.00	− 0.48	0.00	0	0	31	0	0	sw.	H. H. Kessler.
Electra	Amador	725	7	63.6	.....	99	21	40	9	55	0.76	.....	0.45	0	3	21	3	7	.....	Cal. Gas & Elec. Co.
Elsinore	Riverside	1,234	16	63.3	− 2.7	97	21†	35	16	57	0.00	− 0.42	0.00	0	0	28	3	0	nw.	A. F. Schult.
Emigrant Gap	Placer	5,230	37	48.8	− 1.4	76	23	27	5	39	3.49	+ 0.16	1.60	2.0	6	17	2	12	.....	Southern Pacific Co.
Escondido	San Diego	657	17	61.8	− 0.8	96	20	37	16	53	T.	− 0.70	T.	0	0	4	27	0	w.	A. R. Moon.
Eureka	Humboldt	64	25	50.6	− 1.5	68	4	41	6	23	3.52	+ 0.69	1.28	0	14	3	16	12	n.	U. S. Weather Bureau.
Farmington	San Joaquin	111	32	64.6	− 1.5	95	22	48	1	....	0.11	− 0.80	0.11	0	1	20	9	2	nw.	Southern Pacific Co.
Folsom	Sacramento	252	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. O. Hutton.
Fordyce Dam	Nevada	6,500	16	38.1	.....	59	22	20	6	34	2.35	− 2.00	0.65	9.0	9	14	9	8	sw.	E. E. Roening.
Fouts Springs	Colusa	1,650	7	55.6	.....	87	20	29	5†	46	0.52	.....	0.25	0	3	.....	.....	.....	.....	A. J. Burgi.
Fresno	Fresno	293	24	64.0	− 4.4	97	22	41	6	39	0.22	− 0.14	0.22	0	1	20	10	1	nw.	U. S. Weather Bureau.
Fruto	Glenn	624	22	62.0	− 5.9	92	22	42	6	....	T.	− 1.50	T.	0	0	25	0	6	n.	Southern Pacific Co.
Galt	Sacramento	49	33	60.8	− 6.3	72	26	50	8†	....	0.00	− 1.06	0.00	0	0	27	4	0	.....	Do.
Georgetown	Eldorado	2,650	38	54.3	− 8.1	82	21	33	24†	38	1.74	− 1.07	0.82	0	8	.....	.....	.....	.....	H. D. Jerrett.
Gilroy	Santa Clara	193	37	61.8	− 0.7	95	19†	50	1†	....	0.34	− 0.39	0.20	0	3	19	0	12	n.	Southern Pacific Co.
Gilta	Siskiyou	3,300	1	51.8	.....	85	21	29	6	40	3.95	.....	0.99	2.0	9	18	5	8	n.	A. Dannenbrink.
Glennville	Kern	5,500	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Likely.
Gold Run	Placer	3,222	12	54.0	− 4.8	79	22†	32	6	35	1.85	− 0.73	0.65	0	7	19	3	9	.....	Southern Pacific Co.
Gonzales	Monterey	127	12	57.0	− 0.4	78	24	39	19	....	T.	− 0.46	T.	0	0	1	26	4	n.	Do.
Grass Valley	Nevada	2,690	39	53.4	.....	80	21†	31	6	34	1.26	− 1.43	0.73	T.	5	11	16	4	sw.	F. R. Hull.
Greenville	Plumas	3,600	17	49.9	− 2.8	81	21	25	24	48	1.28	− 0.66	0.54	T.	5	14	7	10	sw.	C. H. Higbie.
Groveland	Tuolumne	2,823	2	53.6	.....	82	21†	28	6	36	0.71	.....	0.68	0	2	15	16	0	.....	H. S. Richardson.
Guinda	Yolo	350	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Hanford	Kings	249	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Healdsburg	Sonoma	110	18	58.6	− 0.1	93	21	36	6	44	0.70	− 1.06	0.38	0	3	22	6	3	s.	F. J. Kinley.
Hearst	do	1,800	1	57.2	.....	92	22	33	8	51	5.50	.....	1.10	0	11	16	6	9	nw.	H. D. Ellmaker.
Heber	Imperial	−20	5	74.5	.....	104	22	42	2	50	0.00	.....	0.00	0	0	.....	.....	.....	.....	C. J. Booth.
Hetch Hetchy	Tuolumne	3,665	1	54.0	.....	84	22	30	6†	41	1.07	.....	0.53	T.	6	16	5	10	sw.	E. W. Brown.
Hollister	San Benito	284	37	55.6	− 6.7	90	21	36	7	45	0.22	− 0.27	0.10	0	3	18	11	2	w.	J. N. Thompson.
Hornbrook	Siskiyou	2,154	23	57.6	− 3.7	84	31	32	6	....	0.38	− 0.83	0.34	0	3	24	3	4	n.	Southern Pacific Co.
Hot Springs	Tulare	3,300	4	55.5	.....	85	23†	33	9	45	0.14	.....	0.09	0	2	23	4	4	.....	U. S. Forest Service.
Hullville (near)	Lake	2,250	4	52.3	.....	84	20†	28	6	42	3.83	.....	0.97	0	10	3	21	7	sw.	T. H. Betterton.
Idyllwild	Riverside	5,250	10	50.6	+ 0.3	75	4†	29	6†	38	0.00	− 1.42	0.00	0	0	26	3	2	sw.	Earl Powers.
Independence	Inyo	3,907	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Indio	Riverside	−20	33	77.5	− 2.6	103	22	56	15	44	0.00	− 0.03	0.00	0	0	26	5	0	nw.	F. N. Johnson.
Inskip	Butte	4,975	4	47.4	.....	76	20	26	6	32	3.01	.....	1.12	3.5	4	8	12	11	.....	Cal. Gas & Elec. Co.
Ione	Amador	287	33	66.3	+ 1.3	94	21†	44	6	....	0.00	− 1.22	0.00	0	0	17	0	14	w.	Southern Pacific Co.
Jamestown	Tuolumne	1,471	8	57.5	.....	91	21	30	9	48	0.12	.....	0.10	0	2	27	2	2	.....	Sierra Railway Co.
King City	Monterey	333	24	56.5	− 3.1	95	21	30	1†	55	0.00	− 0.29	0.00		0	31	0	0	e.	Southern Pacific Co.

TABLE 1.—*Climatological data for May, 1911. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Continued.																				
Lake Eleanor	Tuolumne	4,700	1	48.4	.....	78	22	23	6	40	0.81	.....	0.49	3.0	5	15	4	12	s.	O. J. Todd.
La Porte	Plumas	5,000	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. W. Hendel.
Le Grand	Merced	255	11	62.4	− 3.5	95	20	36	18	50	0.00	− 0.35	0.00	0	0	26	0	5	.....	Santa Fe Co.
Lemon Cove	Tulare	600	16	65.4	− 3.6	100	22	39	9	55	T.	− 1.29	T.	0	0	27	2	2	w.	G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	22	48.4	− 3.2	75	22	29	24	23	0.75	− 1.03	0.47	0	2	16	8	7	n.	The Director.
Livermore	Alameda	485	40	58.3	− 3.1	94	21	37	9†	49	0.24	− 0.32	0.17	0	3	18	6	7	w.	E. G. Still.
Lodi	San Joaquin	45	29	60.8	− 2.6	94	22	40	6	42	0.13	− 1.23	0.08	0	2	21	6	4	w.	Ezra Fiske.
Lone Pine	Inyo	2,728	6	60.2	.....	87	18†	33	9†	45	T.	.....	T.	0	0	26	5	0	s.	G. F. Marsh.
Long Valley	Lassen	4,400	2	50.8°	.....	81	20	22	6	42	0.14	.....	0.12	2.0	2	.....	.....	.....	.....	A. G. Evans.
Los Angeles	Los Angeles	293	34	61.4	+ 0.9	94	21	48	16	35	0.02	− 0.41	0.01	0	2	13	16	2	sw.	U. S. Weather Bureau.
Los Banos	Merced	121	24	66.9	− 1.5	92	22	54	6	....	0.00	− 0.39	0.00	0	0	14	0	17	n.	Southern Pacific Co.
Los Gatos	Santa Clara	600	24	57.0	− 3.3	91	21	38	1†	39	0.59	− 0.44	0.27	0	5	16	4	11	n.	F. H. McCullagh.
McCloud	Siskiyou	3,410	1	50.6	.....	84	21†	22	6	46	3.54	.....	0.82	1.0	7	19	8	4	s.	F. F. Spencer.
Macdoel	....do	4,258	4	44.6	.....	77	30	21	6†	43	0.15	.....	0.10	1.0	2	10	10	11	nw.	Butte Valley L. Co.
Madeline	Lassen	5,270	2	44.4	.....	68	14	20	5†	40	0.83	.....	0.25	0	7	8	12	11	nw.	J. H. Williams.
Magalia	Butte	2,321	7	54.7	.....	85	22	32	5	43	2.28	.....	0.90	0	4	18	11	2	se.	Butte Co. R. R. Co.
Mammoth Tank	Imperial	257	33	74.9	− 8.7	102	22	50	1	41	0.00	− 0.02	0.00	0	0	26	4	1	w.	Southern Pacific Co.
Marysville	Yuba	67	40	61.1	− 7.7	90	20	39	6	46	0.14	− 0.73	0.07	0	3	24	0	7	s.	Do.
Mecca	Riverside	−185	5	75.4	.....	102	22	51	15	39	0.00	.....	0.00	0	0	29	2	0	nw.	E. A. Palmer.
Menlo Park	San Mateo	64	33	61.0	− 1.1	88	21	46	6	....	0.30	− 0.25	0.25	0	2	23	3	5	.....	Southern Pacific Co.
Merced	Merced	173	37	62.8	− 4.5	93	22	45	9	33	T.	− 0.57	T.	0	0	22	5	4	nw.	Santa Fe Co.
Mill Creek, No. 1	Amador	.....	4	51.5	.....	73	19†	31	6	38	1.02	.....	0.65	0	7	20	9	2	n.	Cal. Gas & Elect. Co.
Milton (near)	Calaveras	660	20	60.8	− 3.8	91	21	40	6	35	0.47	− 1.02	0.43	0	2	21	10	0	nw.	J. H. Southwick.
Modesto	Stanislaus	90	39	69.5	+ 0.1	93	22	52	25	....	0.18	− 0.29	0.18	0	1	23	0	8	n.	Southern Pacific Co.
Mojave	Kern	2,751	34	59.2	− 8.8	74	29	40	15	24	0.00	− 0.03	0.00	0	0	30	0	1	.....	Do.
Mokelumne Hill	Calaveras	1,550	18	58.2	− 0.3	87	21†	35	6	35	0.71	− 0.98	0.64	0	2	14	9	8	.....	C. E. Prindle.
Mono ranch	Ventura	3,210	5	53.0	.....	82	21	33	9	41	0.19	.....	0.19	0	1	24	2	5	w.	Herbert Lathrop.
Montague	Siskiyou	2,450	23	52.8	−10.1	85	30	29	10	48	0.40	− 0.63	0.25	0	3	11	12	8	s.	I. E. Deboy.
Monterey	Monterey	15	46	59.0	+ 0.7	82	21	50	6†	....	0.45	− 0.04	0.29	0	2	24	5	2	nw.	Southern Pacific Co.
Monterio	Kern	4,500	12	51.2	− 6.7	74	27	34	5	32	0.12	− 1.50	0.10	0	2	16	8	7	nw.	John C. Knecht.
Mount Tamalpais	Marin	2,375	12	50.5	− 3.2	79	21	35	24	27	0.77	− 0.15	0.32	0	8	17	4	10	nw.	U. S. Weather Bureau.
Napa City	Napa	20	34	56.2	− 3.7	94	21	34	6	42	0.16	− 0.75	0.16	0	1	2	28	1	s.	Alex. Hull.
Napa (S. H.)	....do	60	33	56.0	− 3.9	87	21	38	6	38	0.21	− 0.86	0.12	0	3	16	7	8	sw.	W. H. Martin.
Needles	San Bernardino	477	19	77.8	− 2.4	98	23	52	13	41	0.03	− 0.08	0.03	0	1	29	1	1	nw.	Santa Fe Co.
Neilie	San Diego	5,350	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. O. Bailey.
Nevada City	Nevada	2,580	19	53.2	− 2.4	87	21†	28	6†	47	1.22	− 1.00	0.63	0	7	10	10	11	sw.	S. W. Marsh.
Newcastle	Placer	970	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. D. Kellogg.
Newhall	Los Angeles	1,200	34	65.1	+ 1.0	94	21	42	14	....	0.00	− 0.51	0.00	0	0	27	0	4	se.	Southern Pacific Co.
Newman	Stanislaus	91	22	72.2	+ 1.5	100	21	59	16†	25	0.10	− 0.56	0.10	0	1	18	0	13	n.	E. S. Wangenheim.
Nimshew	Butte	2,500	7	55.6	.....	82	21†	30	6	43	1.18	.....	0.82	0	4	.....	.....	.....	.....	Cal. Gas & Elect. Co.
North Bloomfield	Nevada	3,214	14	53.2	− 2.6	81	20†	30	6	38	1.49	− 0.72	0.77	0	3	13	6	12	w.	J. R. McIntosh.
North Fork	Madera	3,000	7	56.4	.....	87	22	32	6†	44	1.18	.....	0.73	0	4	10	19	2	sw.	C. H. Shinn.
Oakdale	Stanislaus	156	17	59.2	− 5.7	94	21	44	6	....	0.35	− 0.51	0.18	0	2	23	8	0	nw.	Southern Pacific Co.
Oak Grove	San Diego	.....	1	57.1	.....	90	22	31	26	53	0.00	.....	0.00	0	0	.....	.....	.....	.....	B. L. Johnson.
Oakland	Alameda	36	35	58.4	+ 0.3	85	20†	45	6†	31	0.19	− 0.76	0.10	0	3	16	8	7	w.	Cabot Observatory.
Oceanside	San Diego	.....	1	64.2	.....	82	21	45	15	31	0.03	.....	0.03	0	1	20	9	2	w.	H. D. Brodie.
Ojai Valley	Ventura	900	5	58.7	.....	95	21	37	16	48	T.	.....	T.	0	0	21	8	2	sw.	W. H. Duncan.
Orland	Glenn	254	29	63.3	− 7.1	95	21	40	5†	40	0.06	− 0.92	0.06	0	1	21	6	4	n.	U. S. Reclamation Service.
Orleans	Humboldt	520	8	62.6	.....	100	29	42	19†	51	2.51	.....	0.78	0	11	17	0	14	.....	F. T. Hale.
Oroville (near)	Butte	250	27	62.2	− 5.0	90	20†	33	11	51	0.04	− 1.58	0.04	0	1	16	3	12	s.	E. D. Fairchild.
Palermo	....do	213	20	65.5	− 0.1	96	18	39	4	44	T.	− 1.46	T.	0	0	11	9	11	s.	Western Pacific Co.
Palm Springs	Riverside	584	22	73.4	− 7.7	102	22	60	14†	....	0.00	− 0.02	0.00	0	0	27	0	4	w.	Southern Pacific Co.
Pasadena	Los Angeles	827	21	60.8	− 2.8	95	21	40	16†	43	0.02	− 0.41	0.02	0	1	27	4	0	sw.	E. D. Sorver.
Paso Robles	San Luis Obispo	800	24	57.8	− 4.1	96	22	32	15	56	0.00	− 0.55	0.00	0	0	27	3	1	nw.	Dr. F. W. Sawyer.
Peachland	Sonoma	190	15	55.2	− 4.4	88	20	34	6†	45	0.78	− 1.15	0.26	0	6	19	7	5	w.	E. H. Parnell.
Penstock Camp	Tuolumne	3,750	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tuolumne W. P. Co.
Placerville	Eldorado	1,875	22	62.1	+ 3.6	94	22	32	25	59	1.31	− 1.14	0.48	0	3	17	2	12	.....	A. Baring-Gould.
Point Lobos	San Francisco	250	18	54.5	+ 0.6	81	21	45	24†	25	0.29	− 0.51	0.16	0	2	14	8	9	nw.	John Hyslop.
Point Reyes	Marin	490	19	50.6	− 1.0	76	21	45	16	26	0.42	− 1.11	0.17	0	6	12	9	10	nw.	U. S. Weather Bureau.
Portersville	Tulare	464	22	65.2	− 8.0	99	22	39	6	48	0.01	− 0.52	0.01	0	1	29	1	1	.....	Leslie McAuliff.
Quincy	Plumas	3,400	16	50.2	− 4.1	81	22	25	1	50	1.08	− 1.40	0.60	0	5	19	7	5	sw.	U. S. Forest Service.
Red Bluff	Tehama	307	34	62.2	− 4.3	90	21	41	6	34	1.03	− 0.30	0.90	0	4	12	11	8	se.	U. S. Weather Bureau.
Redding	Sbasta	552	35	62.8	− 4.4	89	22†	40	6	31	0.86	− 1.33	0.24	0	6	19	5	7	n.	L. F. Bassett.
Redlands	San Bernardino	1,352	18	62.3	− 3.5	94	21	40	26	43	0.45	− 0.31	0.43	0	2	18	11	2	w.	P. W. Moore.
Reedley	Fresno	347	11	63.6	− 7.2	97	22	42	9	53	0.15	− 0.58	0.15	0	1	12	0	19	n.	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	5	59.8	.....	89	21	40	16	34	0.86	.....	0.85	0	2	19	11	1	se.	Southern California Edison Co.
Riverside	Riverside	851	29	63.1	− 2.1	100	21	38	16	57	0.03	− 0.35	0.03	0	1	22	8	1	sw.	C. W. Barton.
Rocklin	Placer	249	40	62.7	− 5.1	90	21	39	3	36	0.12	− 0.91	0.11	0	2	25	0	6	ne.	Southern Pacific Co.
Rohnerville	Humboldt	75	8	52.0	.....	68	20	35	7	30	3.08	.....	0.73	0	7	5	15	11	nw.	Dr. R. Callahan.
Sacramento (1)	Sacramento	71	34	59.8	− 3.1	89	21	44	9	31	0.03	− 0.93	0.02	0	2	14	13	4	s.	U. S. Weather Bureau.
Sacramento (2)	....do	35	58	59.5	− 4.7	88	21	42	6	34	0.05	− 0.79	0.03	0	2	20	6	5	sw.	S. H. Gerrish.
St. Helena	Napa	255	3	58.0	.....	92	21	35	1	49	0.56	.....	0.38	0	2	23	1	7	n.	Frank Kettlewell.
Salinas	Monterey	40	37	56.0	− 4.0	88	21	38	10	42	0.26	− 0.23	0.20	0	2	26	3	2	w.	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	19	62.6	− 1.4	96	21	37	1†	54	0.49	− 0.13	0.49	0	1	19	11	1	sw.	Dr. A. K. Johnson.
San Diego	San Diego	93	40	59.3	− 1.5	74	21	49	16	22	0.01	− 0.36	0.01	0	1	20	8	3	nw.	U. S. Weather Bureau.
San Francisco	San Francisco	207	40	55.6	+ 0.1	85	20	46	24	32	0.28	− 0.47	0.15	0	4	13	12	6	w.	Do.
San Jacinto	Riverside	1,550	18	61.8	− 2.7	95	21†	38	1†	50	0.00	− 0.67	0.00	0	0	23	6	2	w.	E. T. Tanner.
San Jose	Santa Clara	95	36	56.5	− 4.2	88	21	37	1	40	0.21	− 0.36	0.12	0	3	19	9	3	nw.	U. S. Weather Bureau.
San Leandro	Alameda	48	16	55.7	− 4.9	89	20	34	8	45	0.41	− 0.59	0.20	0	4	19	3	9	w.	Frank Jones.
San Luis Obispo	San Luis Obispo	201	16	55.8	− 0.9	93	21	41	27	43	0.08	− 0.24	0.08	0	2	12	8	11	nw.	U. S. Weather Bureau.
San Mateo	San Mateo	22	37	62.6	+ 1.8	85	20	52	25	....	0.35	− 0.20	0.35	0	1	20	7	4	s.	Southern Pacific Co.
San Miguel	San Luis Obispo	616	24	63.1	− 0.7	92	22	48	1†	....	0.07	− 0.21	0.07	0	1	19	6	6	.....	Do.
San Miguel Island	Santa Barbara	500	17	56.4	.....	84	21	50	25	14	0.15	− 0.26	0.15	0	1	21	1	9	nw.	Capt. W. G. Waters.
Sanger	Fresno	371	22	66.6	− 6.0	80	29	55	17†	....	1.28	+ 0.80	1.28	0	1	.....	.....	.....	.....	Southern Pacific Co.
Santa Barbara	Santa Barbara	130	27	59.4	− 0.8	90	21	42	15	38	0.03	− 0.37	0.02	0	2	19	9	3	w.	G. W. Russell.
Santa Clara	Santa Clara	90	22	56.4	− 1.7	90	20†	34	1	48	0.49	− 0.13	0.32	0	3	21	5	5	nw.	Santa Clara College.
Santa Cruz	Santa Cruz	20	38	55.5	− 4.3	88	21	35	25	41	0.50	− 0.53	0.35	0	3	25	4	2	w.	W. R. Springer.
Santa Margarita	San Luis Obispo	996	22	55.4	− 5.0	95	22	34	2†	....	0.00	− 0.89	0.00	0	0	14	11	6	s.	Southern Pacific Co.

TABLE 1.—*Climatological data for May, 1911. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Continued.																				
Santa Maria	Santa Barbara	220	23	62.3	− 2.5	90	21	40	3	26	0.00	− 0.51	0.00	0	0	25	0	6	w.	Edwin Morris.
Santa Monica	Los Angeles	110	26	56.4	− 8.0	84	21	42	10†	28	0.00	− 0.43	0.00	0	0	24	6	1	w.	N. D. Ingham.
Santa Rosa	Sonoma	181	22	55.4	− 6.6	88	20	32	24	43	0.44	− 1.34	0.16	0	5	17	6	8	sw.	M. L. McDonald, jr.
Selma	Fresno	311	25	67.0	− 3.5	90	22	50	5†	....	0.18	− 0.21	0.18	0	1	25	0	6	n.	Southern Pacific Co.
Seven Oaks	San Bernardino	5,000	1	50.5	.....	80	6	27	25†	51	0.30	.....	0.30	2.0	1	29	0	2	.....	M. Lewis.
Shasta	Shasta	1,048	15	60.8	− 5.5	97	21	34	16	57	1.55	− 1.42	1.07	0	4	23	5	3	nw.	Dr. T. J. Edgecomb.
Sierra Madre	Los Angeles	1,400	14	61.9	+ 0.8	93	21	44	16	36	0.39	− 0.90	0.29	0	2	18	4	9	sw.	Mrs. A. C. Gregory.
Sierraville	Sierra	5,000	1	46.3	.....	78	21	22	9†	51	0.53	.....	0.43	0	2	9	3	19	sw.	C. D. Johnson.
Sisson	Siskiyou	3,555	22	48.4	− 6.9	79	21	23	5	42	1.60	− 1.05	0.63	3.0	6	20	6	5	n.	Southern Pacific Co.
Soledad	Monterey	188	37	66.6	+ 4.3	83	5†	50	8	....	0.00	− 0.27	0.00	0	0	31	0	0	n.	Do.
Southeast Farallon	San Francisco	30	8	51.0	.....	60	3	48	28	9	0.25	.....	0.17	0	7	16	10	5	nw.	U. S. Weather Bureau.
Sonora	Tuolumne	1,825	23	57.4	.....	89	22	34	6	40	0.62	− 1.24	0.62	0	1	17	12	2	w.	Chas. P. Jones.
Squirrel Inn	San Bernardino	5,280	1	49.6	.....	78	22	33	6†	27	1.75	.....	1.21	T.	2	24	3	4	sw.	A. D. Frantz.
Stirling City	Butte	3,525	7	57.7	.....	89	22	34	26	44	1.70	.....	0.60	0	5	12	7	12	se.	Butte Co. R. R Co.
Stockton (S. H.)	San Joaquin	23	40	61.6	− 2.5	91	21	40	6	35	0.21	− 0.46	0.21	0	1	13	17	1	nw.	State Hospital.
Storey	Madera	296	11	61.6	− 3.7	95	22	40	5†	52	0.00	− 0.64	0.00	0	0	28	0	3	nw.	Santa Fe Co.
Suisun	Solano	20	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Summerdale	Mariposa	5,270	15	48.1	− 1.4	74	22	24	6	28	1.03	− 1.45	0.61	5.0	3	23	5	3	.....	J. H. Lowry.
Summit	Placer	7,017	38	41.2	− 1.4	58	21†	20	6	24	1.52	− 0.62	0.60	15.0	6	20	2	9	sw.	Southern Pacific Co.
Susanville	Lassen	4,175	22	48.6	− 7.3	84	21	24	14	56	0.69	− 1.06	0.19	T.	6	9	21	1	sw.	James Branham.
Tamarack	Alpine	8,000	5	32.5	.....	60	21†	11	4	41	1.39	.....	0.45	11.0	4	18	2	11	s.	William Bennett.
Tehachapi	Kern	3,964	34	59.6	+ 0.4	78	21	40	10	....	0.00	− 0.40	0.00	0	0	.....	.....	.....	.....	Southern Pacific Co.
Tehama	Tehama	220	40	61.4	− 7.5	94	20†	46	14	....	T.	− 0.85	T.	0	0	18	2	11	s.	Do.
Tejon Rancho	Kern	1,500	9	46.8c	.....	82	22	38	9	37	0.05	.....	0.05	0	1	.....	.....	.....	.....	S. E. Bailey.
Three Rivers	Tulare	870	1	61.4	.....	94	22	37	6†	44	0.24	.....	0.24	0	1	16	12	3	sw.	E. D. Barton.
Towle	Placer	3,704	25	49.8	− 7.7	76	3†	28	24	40	2.55	− 0.31	1.10	2.0	3	21	0	10	sw.	Southern Pacific Co.
Tracy	San Joaquin	64	31	66.4	− 2.7	92	22	52	1†	....	0.02	− 0.53	0.02	0	1	23	7	1	nw.	Do.
Ukiah	Mendocino	620	18	57.0	− 3.4	92	21	32	6	49	1.42	+ 0.14	0.38	0	8	18	6	7	nw.	Dr. Geo. McCowen.
Upland	San Bernardino	1,750	14	61.2	+ 1.5	94	21	40	1†	48	0.55	− 0.78	0.55	0	1	27	2	2	w.	A. P. Harwood.
Upper Lake	Lake	1,350	26	57.2	− 2.6	91	21	34	6	43	1.10	− 0.15	0.31	0	7	20	4	7	nw.	C. M. Hammond.
Vacaville	Solano	175	23	60.5	− 4.6	92	21	33	6	45	0.30	− 1.14	0.20	0	2	18	13	0	sw.	G. O. Coburn.
Valley Springs	Calaveras	673	22	63.8	− 2.0	93	22	48	6†	....	0.61	− 0.89	0.42	0	3	24	5	2	nw.	Southern Pacific Co.
Visalia	Tulare	334	23	.....	.....	88	21†	.....	.....	.....	0.00	− 0.55	0.00	0	0	13	16	2	n.	Santa Fe Co.
Warner Springs	San Diego	3,165	3	55.9	.....	84	21	33	15	41	0.02	.....	0.02	0	1	30	1	0	.....	Mrs. F. S. Sandford.
Wasco	Kern	336	11	60.6	− 7.8	95	25	33	2	56	0.00	− 0.37	0.00	0	0	25	2	4	.....	Santa Fe Co.
Watsonville	Santa Cruz	23	15	54.8	− 3.9	90	21	33	6†	49	0.34	− 0.32	0.19	0	4	11	13	7	sw.	Spreckels Sugar Co.
Weitchpec	Humboldt	1,700	1	51.4	.....	82	20†	32	19†	49	6.78	.....	1.65	T.	13	14	11	6	nw.	M. E. Lathrop.
Westley	Stanislaus	90	22	66.6	− 4.0	93	21	46	5	....	0.00	− 0.66	0.00	0	0	23	0	8	n.	Southern Pacific Co.
Wheatland	Yuba	84	24	60.8	− 3.6	88	21†	39	6	37	0.17	− 1.33	0.08	0	3	15	10	6	s.	Wm. Lumbard.
Willows	Glenn	136	32	59.8	− 8.7	89	21	38	7	39	0.16	− 0.56	0.09	0	4	18	6	7	n.	M. T. Harrington
Yosemite	Mariposa	3,945	7	52.7	.....	85	22	24	6	55	1.28	.....	0.07	0	3	13	14	4	ne.	J. P. Kelley.

a, b, c, etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No. 11, California.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon.																																	
Klamath Agency	Klamath					.05			.03								.05																0.13
Klamath Falls	do																																
Lakeview	Pitt																																
Long Valley	do																																
Merrill	Int. drainage					.28		.05	.08						.14																.23		0.78
Yonna	do	T.				.16			.10	.06			T.				.08	.09	.18												T.		0.67
California.																																	
Abertine	Sacramento																																
Aguanga	Coast																																
Alameda	do					.20										T.	.01	T.															0.21
Alturas	Sacramento					.13			.03	.05									.07				.08		.20							.03	0.59
Angels Camp	San Joaquin					.04		T.																						.05			0.69
Angiola	do																																
Antioch	do									.09									.07														0.16
Aptos	Coast					.20																											0.20
Arrowhead Springs	do														.46	.32														.04			0.82
Auburn	Sacramento		T.			.26	.07		T.								T.		.09	T.													0.42
Avalon	Ocean																																0.00
Azusa	Coast														.81																		0.81
Bagdad	Desert																																0.00
Bakersfield	San Joaquin																																0.00
Barstow	Desert														.02																		0.02
Bear River	San Joaquin																																
Bear Valley (1)	Sacramento					.72		.18									.20	.88	.22												.34	.10	2.64
Bear Valley (2)	San Joaquin																																
Bear Valley Dam	Coast														1.03																		1.03
Belotta	San Joaquin						.50									T.			T.														0.50
Ben Lomond	Coast				.53											.08		.23															0.84
Berkeley	do					.16													.11														0.27
Biggs	Sacramento																														T.		T.
Bishop	Owens																																
Bishop Creek	do														1.05															.40	.30		1.75
Blocksburg	Coast	.20	.18		.97			.15	.30	.02							1.04	.97	.47						T.						T.	.07	4.37
Blue Canon	Sacramento					.10	.30		.02								T.		.90	.20													1.52
Blythe	Desert																																0.00
Boulder Creek	Coast					.28											T.	.25															0.53
Bowman's dam	Sacramento																																
Branscomb	Coast	.45	.58			.80			.33	.18						T.	1.23	1.40	.75											T.	T.	T.	5.72
Brush Creek	Sacramento				.81			T.						.07					.04											.07		.39	1.38
Burney	do					.70			.10				T.				T.	T.	.66													T.	1.46
Butte Valley	do		.06			.51	.05											.27	.42												.17	.19	1.67
Calexico	Desert																																0.00
Caliente	San Joaquin																																
Calistoga	Coast					.17											.07	.16													.02		0.42
Campbell	do		T.			.20											.02		.20											T.			0.42
Campo	do																																0.00
Camptonville (near)	Sacramento		.04			.86											.29	.08	.60											.10	.08	.03	2.08
Cedarville	M't'n Lakes	T.	T.			T.		T.	.12	T.					.24		.09	.04	.30				.16		T.					T.	.08	1.03
Chester	Sacramento		.04			.25												.10	.16												.02		0.57
Chico	do	T.				.10												.03													.01	.03	0.17
Chico (near)	do	T.	T.			.10												T.													.02		0.12
China Flat	Coast	.16	.25		.36			.24	.02				T.				.62	.43	.83						T.							T.	2.91
Chino	do														.05																		0.05
Cisco	Sacramento																																
Claremont	Coast					.02	T.								.09	.97	T.																1.08
Cloverdale	do	T.	T.			.24									T.		.17	.19	.23												T.	T.	0.83
Colfax	Sacramento					.32	.49										.03		.32													T.	1.16
Colgate	do					.36	.37										.06	.02	.38	.01												.02	1.14
Colusa	do	T.	T.		.05											.04	.05	.06													T.	.11	0.31
Corning	do																	.24															0.24
Corona	Coast																																0.00
Cuyamaca	do														T.																		T.
Daunt	San Joaquin						T.								T.																.19	T.	0.19
Davisville	Sacramento					T.																									T.	T.	T.
Deer Creek	do		T.			.97	.10	.05									.21	.07	.97	T.										T.	.22	.03	2.62
Del Monte	Coast					.28												.11														.07	0.46
Delta	Sacramento																																
Denair	San Joaquin																																
Descanso	Coast																																0.00
Dinuba	San Joaquin																																0.00
Dobbins	Sacramento		T.			.72											.10	T.	.33												T.	.03	1.18
Downieville	do		.04			.72	.15								T.		.15	.10	.72											T.	T.	T.	.11	1.99
Dudleys	San Joaquin				.57														T.											T.	.03	.11	0.71
Dunnigan	Sacramento		T.				T.												.15												T.		0.15
Dunsmuir	do		.47	.61		.47	.03		.18								.65	.52	1.11														4.04
Durham	do					T.													T.												.17		0.17
Dyerville	Coast					.95									.50	.49		.60								.90		.30					3.74
East Park	Sacramento		.06																.06														0.12
Edgewood	Klamath					.34		.16						.06		.27		.04															0.87
Edison	San Joaquin																															.01	0.01
El Cajon	Coast																																0.00
Electra	San Joaquin					.27	.45	T.																								.04	0.76
Elsinore	Coast																																0.00
Emigrant Gap	Sacramento				1.00	.10		.10								T.		1.60	.02										T.	T.		.67	3.49
Escondido	Coast							T.																									T.
Eureka	do	.19	.04		.82	.55		.44	.29	.05				.01		.13	.37	.49	.04				.03	.07									3.52
Fairmont	do																																
Farmington	San Joaquin					.11																								T.			0.11
Felton	Coast					.32											.07		.17														0.56
Firebaugh	San Joaquin						.11																								T.	.08	0.19
Folsom	Sacramento																																
Fordyce Dam	do		.10			.65		.20		.10				.25	T.		.20	.15	.65											T.	T.	.05	T.	2.35
Fort Bragg	Coast	.21	.09		.80	.06										.06	.70	.40															2.32
Fort Ross	do																																
Fouts Springs	Sacramento	.07															.25	.20															0.52
Fredalba	Coast														1.88											.05							1.93
Fresno	San Joaquin					.22									T.															T.	T.		0.22

TABLE 2.—*Daily precipitation for May, 1911. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Contd.																																	
Fruto	Sacramento																		T.														T.
Galt	San Joaquin																																0.00
Georgetown	do																																‡1.74
Gilroy	Coast					.20	.10												.04														0.34
Gilta	do	.15	.30			.42		.23	.26	.06							.65	.99	.89														3.95
Glendora	do																																
Glen ranch	do															.08																	0.08
Glennville	San Joaquin	T.	T.			.45		T.		T.							.09	T.	.54												.12	.08	1.28
Glenwood	Coast				.60	.05										.08		.20															0.93
Gold Run	Sacramento		T.			.40	.50		T.								.10	.05	.65	.05												.10	1.85
Gonzales	Coast																											T.					T.
Grass Valley	Sacramento	T.				.73	.01	T.						T.			T.	.14	.34											T.	.04	T.	1.26
Greenville	do	T.	T.			.45		T.		T.							.09	T.	.54												.12	.08	1.28
Gridley	do					.10													.01												.02	.04	0.17
Groveland	San Joaquin					.68																										.03	0.71
Guinda	Sacramento																																
Hanford	San Joaquin																																
Head Dam	Sacramento					1.01	.01										.20	.02	.55												.02	.02	1.83
Healdsburg	Coast				24											.08	T.	.38															0.70
Hearst	do	.30	.40		.50	.30										.30	.50	.80	1.10											.40	.50	.40	5.50
Heber	Desert																																0.00
Helen mine	Coast	.05	.14			.97											.44	.64	1.04														3.28
Hesperia	Desert																																
Hetch Hetchy	San Joaquin					.53			T.						T.	.09	T.		.01											.08	.16	.20	1.07
Holcomb	Coast														.08																		0.08
Hollister	do					.09	.10												.03														0.22
Hornbrook	Klamath			.02	.32			.04																									0.38
Hot Springs	San Joaquin														.05																.09		0.14
Hullville	Coast	.32	.32			.31		.01	.07						T.		.28	.68	.58										T.		.29	.97	3.83
Idyllwild	do																																0.00
Independence	Owens																																
Indio	Desert																																0.00
Inskip	Sacramento	T.	T.			1.12		T.						T.			.32	.45	1.12										T.		T.	T.	3.01
Ione	San Joaquin																																0.00
Jacksonville	do						.60																										0.60
Jamestown	do					.10	.02																										0.12
Jenny Lind	do					.25																											0.25
Jolon	Coast					.02																									.10		0.12
Julian	do																																0.00
Kennedy mine	San Joaquin																																‡0.67
Kennett	Sacramento																																0.00
Kentfield	Coast				.43												.43		.66														1.52
Kernville	San Joaquin																																‡0.00
King City	Coast																																0.00
Knights Landing	Sacramento					T.													.03														0.03
La Grange	San Joaquin					.41																											0.41
Lake Eleanor	do					.49		T.							T.	.02															.04	.14	.12	0.81
Lakeside	Coast																																0.00
La Porte	Sacramento																																
Lathrop	San Joaquin					.02																											0.02
Laurel	Coast					.60	.10											.25															0.95
Laytonville	do		.50	.21	.55			.15									.14	.38	.47	1.50													3.90
Le Grand	San Joaquin																																0.00
Lemon Cove	do					T.																									T.		T.
Lick Obsy	Coast					.47													.28														0.75
Livermore	do	T.				.17		T.									.01		.06												T.		0.24
Lodi	San Joaquin	T.				.08		T.											.05												T.		0.13
Lone Pine	Owens																														T.		T.
Long Camp	San Joaquin																																
Long Valley	M't'n Lakes					.02		T.		.12								T.	T.												T.	T.	0.14
Lordsburg	Coast														1.20																		1.20
Los Alamos	do					T.																								T.			T.
Los Angeles	do					.01								T.	.01																		0.02
Los Banos	San Joaquin																																0.00
Los Gatos	Coast		.02			.27											.10		.18												T.	.02		0.59
Los Molinos	Sacramento				.13	T.												.02															0.15
Lowe Observatory	Coast														.25																T.		0.25
McCloud	Sacramento	T.	.45	.14		.60			.13								82	.72	.68													T.	3.54
Macdoel	Klamath					.10			.05																								0.15
Madeline	M't'n Lakes	.13			.09		T.	T.		.05			T.		.12	T.	T.	.10						T.							.09	.25	0.83
Magalia	Sacramento				.90											.10	.43	.85													T.		2.28
Mammoth Tank	Desert																																0.00
Mariposa	San Joaquin					.55																										.05	0.60
Marysville	Sacramento				.07	T.	.02											.05													T.		0.14
Mecca	Desert																																0.00
Molones	Sacramento					T.	.54																									T.	0.54
Menlo Park	Coast					.25													.05														0.30
Merced	San Joaquin																															T.	T.
Merced Falls	do					T.	.39																										0.39
Mesa Grande	Coast															.20																	0.20
Mill Creek (1)	San Joaquin					.65		.03	.02						.09																.01	.19	.03	1.02
Mill Creek (2)	Coast													T.	.78	T.													.01				0.79
Mills College	do					.16											.06		.15														0.37
Milo	San Joaquin									.20																					.23	.05		0.48
Milton (near)	do					.43		T.									T.														.04		0.47
Modesto	do					.18																											0.18
Mojave	Desert																																0.00
Mokelumne Hill	San Joaquin					.64									T.																.07	T.	0.71
Mono Ranch	Coast														.19																T.		0.19
Monroeville	San Joaquin																																0.00
Montague	Klamath				T.	.25											.14	.01												T.		T.	0.40
Monterey	Coast					.29																										.16	0.45
Monterio	San Joaquin						.10								.02																		0.12
Montgomery Creek	Sacramento																																
Mount Tamalpais	Coast	.01	.02		.01	.29										.01	.11	.12	.20														0.77
Mount St. Helena	do			.25		.55											.25		.85														1.90
Napa City	do		T.														.16																0.16
Napa (S. H.)	do					.12											.04		.05														0.21

TABLE 2.—*Daily precipitation for May, 1911. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Contd.																																	
Needles	Desert														.03																		0.03
Nellie	Coast														.25																		0.25
Nevada City	Sacramento	T.	.01			.63	.16	T.							T.		.07	.04	.27											T.	T.	.04	1.22
Newcastle	do																																
Newhall	Coast																																0.00
Newman	San Joaquin					.10																											0.10
Nimshew	Sacramento					.82											.25														.06	.05	1.18
North Bloomfield	do					.77												.62														.10	1.49
North Fork	San Joaquin					.73								T.	.10																.20	.15	1.18
North Lakeport	Coast				.15	.12									.05	.07	.12	.20													.15	.06	0.92
Oakdale	San Joaquin					.17	.18																										0.35
Oak Grove	Coast																																0.00
Oakland	do	T.				.10		T.								T.	.01	T.	.08												T.	T.	0.19
Oakville	do																																0.00
Oceanside	do					T.									.03																		0.03
Ojai Valley	do														T.													T.	T.	T.			T.
Oriand	Sacramento	T.	T.		.05											T.		T.													T.		0.06
Orleans	Klamath	.13	.01		.46	.05	.42	.07								.37	.12	.78	.05													.05	2.51
Oroville	Sacramento																	.04															0.04
Ozena	Coast																																
Palermo	Sacramento																					T.											T.
Palm Springs	Desert																																0.00
Parkfield	Coast																														.07		0.07
Pasadena	do					.02																											0.02
Paso Robles	do																																0.00
Peachland	do	.03	.07		T.	.18		T.							T.	T.	.13	.11	.26											T.	T.		0.78
Penstock Camp	San Joaquin																																
Phoenix Dam	do					.62																								.03	.03		0.68
Pilot Creek	Sacramento					.98		.08							T.	T.	T.		.61											.18	.53	.15	2.53
Pinchot	Coast														.42																		0.42
Pine Crest	do																																
Placerville	Sacramento					.48													.42											T.		.41	1.31
Point Lobos	Coast		T.			.16			T.							T.			.13														0.29
Point Loma	do					T.																.01	T.										0.01
Point Reyes	do	T.	.17		.04	.08										T.	.10	.02	.01														0.42
Polasky	San Joaquin						.15																										0.15
Porterville	do															.01																	0.01
Portulaca	do					.58									T.															.14	.11	.20	1.03
Prattville	Sacramento					.30													.15	.19											.20	.22	1.06
Priest Valley	Coast																																
Quincy	Sacramento					.38				.04							.03	.03	.60														1.08
Red Bluff	do	T.	.08			.90												.02													.03		1.03
Redding	do	T.	T.	.12		.22		T.									.08	.13	.24					T.								.07	0.86
Redlands	Coast														.43	T.										T.				.02			0.45
Reedley	San Joaquin					.15																											0.15
Represa	Sacramento				.22												T.														.04		0.26
Rialto (near)	Coast														.85	.01																	0.86
Rio Vista	Sacramento					T.												T.		.13													0.13
Riverside	Coast														.03																		0.03
Rocklin	Sacramento					.10									T.				.02														0.12
Rhonerville	Coast	.20	T.			.73		.15	.39							T.	.64	.52	.45														3.08
Sacramento (1)	Sacramento					.01													.02														0.03
Sacramento (2)	do	T.				.02		T.											.03											T.		T.	0.05
St. Helena	Coast															.18			.38														0.56
Salinas	do				.20																											.06	0.26
San Bernardino	do														.49																		0.49
San Diego	do					.01																											0.01
San Francisco	do	T.	T.		T.	.15		T.								T.	.02	.04	.07											T.			0.28
San Jacinto	do																																0.00
San Jose	do		T.			.12											.01		.08											T.			0.21
San Leandro	do				.20			.04				T.			T.	.08		.09												T.			0.41
San Luis Obispo	do				.01	.07																										T.	0.08
San Mateo	do					.35										T.																	0.35
San Miguel	do																														T.	.07	0.07
San Miguel Island	Ocean			.15																													0.15
Sanger	San Joaquin																														1.28		1.28
Santa Ana River	Coast														1.29	.07										.03							1.39
Santa Barbara	do																							.01	.02						T.		0.03
Santa Clara	do		T.			.32		T.										.07		.10										T.			0.49
Santa Cruz	do				.35													T.	.12											.03	T.		0.50
Santa Margarita	do																																0.00
Santa Maria	do																																0.00
Santa Monica	do																																0.00
Santa Rosa	do		.05		T.	.15										T.	.06	.02	.16														0.44
Sausalito	do					.17																											0.17
Selma	San Joaquin					.18																											0.18
Seven Oaks	Coast														.30																		0.30
Shasta	Sacramento				.09	.23											.16	1.07															1.55
Shingle Springs	San Joaquin					.25																											0.25
Sierra Madre	Coast					T.									.29											10				T.			0.39
Sierraville	M't'n Lakes													T.																	.10	.43	0.53
Sisquoc ranch	Coast																																0.00
Sisson	Sacramento	.04			.18			.63					.20					.35														.20	1.60
Soledad	Coast																																0.00
Sonora	San Joaquin					.62	T.																							T.	T.		0.62
Southeast Farallon	Ocean		.02		.06	.11		T.									.01	.01	.02												.02		0.25
Spreckels	Coast					.22	.02											.06														.02	0.32
Squirrel Inn	do														1.21	.54																	1.75
Stirling City	Sacramento				.50	.60	T.	T.									.25	.15	.20	T.													1.70
Stockton (S. H.)	San Joaquin					.21																								T.			0.21
Storey	do																																0.00
Suisun	Sacramento																																
Summerdale	San Joaquin					.61									.22																20		1.03
Summit (1)	Sacramento		.02				.40							.10		.30	T.	.10	.60														1.52
Summit (2)	Coast																																
Susanville	M't'n Lakes					.10	.09										.12		.17												.02	.19	0.69
Tamarack	Sacramento						.45	.31	.42																					.21			1.39
Tehachapi	San Joaquin																																0.00
Tehama	Sacramento					T.													T.														T.
Tejon Rancho	San Joaquin						.05																										0.05

TABLE 2.—*Daily precipitation for May, 1911. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Contd.																																	
Three Rivers	San Joaquin.																														.24		0.24
Towle	Sacramento.					1.10	.45												1.00														2.55
Tracy	San Joaquin.					.02																											0.02
Tulare	do														.07																	0.07
Tustin (near)	Coast																																0.00
Ukiah	do	.04	.07			.30		T.	.01								.12	.38	.30											T.	T.	.20	1.42
Upland	do														.55																		0.55
Upper Lake	Sacramento.	T.	T.			.27			.01						T.		.12	.12	.12												.31	.15	1.10
Upper Mattole	Coast	.04	.39	T.		1.27	T.		.29	.10				.07			1.00	.39	1.55	.07					.08								5.25
Vacaville	Sacramento.					.20											.10													T.	T.		0.30
Valley Springs	San Joaquin.					.42	.13																								.06		0.61
Visalia	do																																0.00
Warner Springs	Coast														.02																		0.02
Wasco	San Joaquin.																																0.00
Watsonville	Coast				.19	.04												.09													.02		0.34
Weitchpec	Klamath	.15	.61	.01		.72	.07	.55	.62	.11			T.				.78	1.41	1.65						.08	.02							6.78
West Branch	Sacramento.	.04	.05	.05		1.06	.02		T.					T.			.28	.44	.89											T.	.08	.07	2.98
Westley	San Joaquin.																																0.00
Westpoint	do				T.	.75	.06							T.	T.	T.														T.	.04	.02	0.87
West Saticoy	Coast																																0.00
Wheatland	Sacramento.	T.	T.			.08		T.									.03		.06												T.		0.17
Willows	do	T.	.01			.09											.04	.02													T.		0.16
Yosemite	San Joaquin.					.70																								.30	.28		1.28

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																							
			Alturas.		Barstow.		Branscomb.		Brawly.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1			60	27			52	34	92	55	63	45	62	46	75	46			68	49	54	42	62	33	77	40	62	46
2			60	38	86	48	52	47	90	51	73	52	57	50	80	48			68	50	54	42	66	43	81	44	68	55
3			68	37	89	55	57	36	91	54	71	50	62	50	79	51			71	53	54	42	71	39	82	46	73	53
4			71	40	95	55	62	43	94	59	75	50	68	45	85	49			65	52	49	43	74	36	86	48	75	49
5			66	33	87	53	53	34	93	56	77	50	55	43	62	49			65	52	48	38	53	35	79	52	57	46
6			63	19	83	45	57	29	87	59	72	40	54	41	70	41			68	50	55	38	65	28	83	39	69	41
7			67	27	89	48	58	33	92	56	76	43	62	42	79	47			75	50	51	42	65	32	85	43	72	46
8			60	32	86	53	51	34	93	57	73	49	53	43	70	48			71	53	49	37	63	40	79	44	66	50
9			55	22	82	47	50	32	93	60	70	42	52	45	72	45			69	52	55	37	65	31	81	40	70	46
10			67	22	81	39	65	35	87	56	76	48	53	46	80	47			79	51	64	49	72	31	83	41	78	50
11			74	25	90	49	69	36	92	56	78	46	53	47	86	47			71	54	67	52	76	33	86	42	82	50
12			70	35	94	45	62	35	92	55	76	46	52	48	80	53			66	54	59	41	71	35	87	44	76	56
13			54	30	86	55	61	34	92	55	71	43	53	47	72	48			62	54	51	38	65	36	85	45	69	49
14			56	27	69	59	60	34	82	60	73	55	52	44	73	47			61	51	60	46	70	30	83	46	70	54
15			62	29	77	45	55	36	79	55	69	48	52	48	76	48			62	51	51	39	64	35	77	44	67	45
16			57	35	85	48	53	39	87	53	68	49	52	45	71	49			67	48	47	37	57	38	79	42	65	50
17			53	37	84	54	47	39	88	58	63	50	54	47	74	49			68	52	46	38	54	37	80	43	60	50
18			52	35	85	55	45	36	92	59	72	53	54	48	73	51			68	52	51	43	61	44	80	44	67	53
19			60	23	86	56	71	36	93	56	74	52	54	45	78	46			70	55	67	45	76	32	86	45	77	51
20			75	24	86	47	80	37	91	62	84	60	64	43	91	55			86	56	74	59	83	41	88	46	88	53
21			82	29	92	44	84	44	97	60	87	53	58	45	94	57			94	59	79	65	87	40	95	48	90	56
22			78	37	93	45	81	42	101	55	84	57	55	48	97	59			86	58	78	62	87	44	99	52	88	61
23			72	40	81	60	75	37	97	62	81	52	52	46	88	53			69	57	62	35	72	55	89	57	75	57
24			60	30	86	57	68	31	94	65	67	43	54	44	72	47			67	56	52	35	73	34	88	42	66	46
25			61	24	72	44	65	31	84	61	77	42	52	46	73	46			66	54	56	38	67	28	86	44	76	47
26			61	31	85	45	68	37	87	51	73	46	53	44	77	45			69	51	61	39	70	34	85	42	74	48
27			62	29	88	45	71	40	92	.....	82	47	53	47	84	50			72	51	60	52	77	35	85	44	84	52
28			73	30	91	53	70	40	92	56	82	.....	53	47	87	52			67	56	67	49	80	37	75	43	88	54
29			77	42	85	50	75	39	90	55	.....	49	55	47	78	52			64	55	50	40	74	45	90	42	78	58
30			78	41	85	49	76	41	89	60	73	51	53	49	76	55			65	54	45	41	69	40	88	58	72	54
31			67	37	80	50	79	41	91	57	72	52	56	49	80	53			67	51	59	44	68	40	89	55	71	55
Mns.			65.4	31.2	85.3[a]	49.9[a]	63.9	36.8	90.8	57.1[a]	74.3[a]	48.8[a]	55.2	46.0	78.5	49.5			69.9	52.9	57.5	43.5	69.6	36.8	85.0	45.3	73.3	51.2

Date.	California.																									
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	76	42	67	44	62	51	63	48	69	37	63	42	65	50	62	36	60	39	66	42	42	30	61	32	67	31
2	76	42	69	52	64	50	60	52	70	48	60	46	66	46	66	53	51	39	68	46	42	36	62	32	72	32
3	79	47	68	47	65	54	62	50	67	42	62	44	63	47	68	42	52	45	68	47	48	34	66	36	76	34
4	82	49	68	48	62	55	60	51	71	44	62	46	66	48	65	43	54	34	68	46	50	43	69	35	78	35
5	72	52	61	48	64	56	57	48	62	46	60	49	71	55	61	46	45	23	60	47	43	25	51	35	72	30
6	75	46	69	44	65	56	62	49	67	40	67	47	72	55	69	33	58	31	64	40	40	20	56	25	68	24
7	82	45	62	46	64	52	57	48	64	38	72	48	71	53	65	36	57	32	68	42	42	28	67	30	72	30
8	79	47	67	47	66	56	58	49	62	47	65	48	68	44	66	39	48	32	68	44	42	28	55	31	76	30
9	77	45	68	44	64	54	63	48	67	44	65	48	76	45	70	38	56	33	68	44	38	24	57	30	75	28
10	85	45	77	49	67	52	68	48	73	39	76	46	76	44	73	36	59	35	72	43	48	30	61	27	75	28
11	80	49	79	49	63	55	63	47	73	41	69	44	65	55	72	37	60	36	79	44	48	30	69	32	76	29
12	72	51	71	50	62	56	60	48	67	45	62	48	58	53	75	40	69	31	68	47	50	36	68	34	74	37
13	68	51	70	46	62	57	61	47	64	39	60	43	64	54	70	40	53	36	74	46	46	34	55	33	67	31
14	59	49	71	55	60	55	66	48	72	39	55	42	63	43	76	37	59	30	74	44	38	29	60	24	68	31
15	64	47	58	50	61	53	53	48	61	47	58	48	63	42	71	39	60	34	70	45	44	35	62	33	70	31
16	71	41	62	50	62	49	58	49	62	47	60	45	69	43	61	44	61	35	71	47	36	28	62	32	66	30
17	71	46	60	47	64	53	59	48	66	45	58	48	68	47	57	41	48	36	72	47	38	28	59	31	65	30
18	73	47	68	54	64	54	60	53	64	47	62	46	76	47	67	50	55	33	68	54	39	32	54	39	73	30
19	83	63	74	55	62	58	77	53	77	41	81	54	77	52	83	44	60	36	78	50	38	36	61	29	75	31
20	89	50	83	56	68	56	85	60	87	47	80	54	78	54	88	47	63	42	86	52	52	36	68	29	82	34
21	94	51	89	58	74	52	85	53	88	49	93	50	90	52	87	44	79	46	91	68	58	40	84	28	84	34
22	91	49	85	59	67	54	59	48	79	47	77	51	80	56	76	44	74	43	90	57	58	50	80	45	85	30
23	80	46	62	48	63	55	53	48	64	47	60	48	64	53	65	46	70	28	70	54	54	46	72	40	82	30
24	76	53	66	44	65	54	58	46	65	40	62	46	66	54	67	32	55	34	71	44	52	32	58	32	71	42
25	66	53	73	49	63	53	60	47	67	40	59	43	70	47	71	36	61	34	72	45	54	30	62	29	63	30
26	78	40	70	46	68	50	61	47	68	38	61	43	70	48	72	33	62	40	74	48	54	36	62	32	71	32
27	82	45	80	49	65	55	60	47	75	40	70	41	71	49	74	37	62	39	80	48	58	42	65	31	76	33
28	77	47	79	50	62	57	55	47	71	46	56	47	64	55	72	38	71	38	82	50	56	48	70	31	77	35
29	72	52	63	50	65	58	57	48	62	51	59	46	64	53	69	48	73	39	68	48	56	48	78	31	76	37
30	72	52	64	49	65	56	58	51	70	45	61	43	63	52	57	50	74	38	68	49	52	40	76	38	70	40
31	73	45	73	49	66	56	61	52	72	51	63	44	64	45	64	52	76	41	68	50	58	44	72	42	67	38
Mns.	76.6	48.0	70.2	49.4	64.3	54.3	61.9	49.2	69.2	43.8	65.1	46.4	69.1	49.7	69.6	41.3	60.8	35.9	75.6	47.7	47.5	34.8	64.6	32.5	73.2	32.2

[a], [b], [c], etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the United States Weather Bureau.
§ § Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

CLIMATOLOGICAL DATA FOR MAY, 1911.

DISTRICT NO. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

GENERAL SUMMARY.

The month, besides being wet and unusually cool, was marked by the occurrence of a severe storm which first made its appearance off the Washington coast on the morning of the 17th and was 24 hours in crossing the district. The unusually low barometric pressure of 29.15 inches reduced to sea level was reported from Tatoosh Island, Wash., at the time of taking the regular evening observation of that date, and a maximum wind velocity of 78 miles per hour from the southeast occurred at North Head, Wash., at 2.30 p. m. the same day. On account of the ample warnings given, the casualties during this storm were of minor consequence as all deep water vessels were held in port, and so far as learned the only damage done was the capsizing of a few fishing boats at the mouth of the Columbia River. The crews of these boats were rescued by the Life-Saving Service, and the boats and tackle were afterwards recovered. Another stormy period prevailed on the 4th and 5th, at which time the highest winds of the month occurred in the interior of the district.

The excess in rainfall was very beneficial, as the three preceding months were unusually dry. The cool weather, however, caused vegetation to be backward, and early fruit such as strawberries and cherries were late in ripening. Pasturage was excellent and the condition of stock in consequence was above the average. The cool weather retarded the melting of the snow in the mountains, and the annual rise in the Columbia River was late in starting, and at no station was the water above the flood stage at any time during the month.

TEMPERATURE.

The mean temperature for the month was below normal in all sections of the district, except over a comparatively narrow belt along and near the main range of the Rocky Mountains in Idaho, where temperatures near the normal were reported.

The deficiency averaged greatest in central Oregon, southern Washington, and the central portion of western Idaho, the greatest departure reported being −7.3° at Fort Simcoe, Wash. The highest mean temperatures were reported from southeastern Washington and northeastern Oregon, and the lowest from the mountain stations of Oregon. Along the coast the temperatures were rather uniform during the month, but east of the Cascade Range wide variations were experienced.

With the exception of a short warm period early in the month and another near the close, the weather was cool throughout the month. Cloudy and rainy weather beginning about the 15th culminated in the coolest weather of the month on the 19th and 20th; the lowest temperatures were, however, recorded at most stations during a period of fair weather from the 6th to 11th.

The mean temperature as determined from the records of 253 stations was 51.1°, which is 2.7° below the district average for May, and ranged between 41° at Musick and Pompeii, Oreg., and 60.8° at Zindel, Wash., in the Snake River Valley. The highest temperature recorded, 99°, occurred at Kennewick, Wash., on the 31st, and the lowest, 13°, at Cliff, in the Christmas Lake country, Oregon, on the 25th.

PRECIPITATION.

The precipitation for the month averaged about 44 per cent above the normal amount for May, the greatest excess being along the coast near the mouth of the Columbia River. All stations in this drainage area in western Montana and Wyoming, and a few stations in eastern Idaho, central Oregon, and northeastern Washington report a deficiency in precipitation. The excess was general west of the Cascade Range.

In the western portion of the district the rainy weather was nearly continuous during the first half of the month, being broken by fair weather only on the 10th and 11th and on the 14th and 15th; the heaviest precipitation, however, occurred generally on the 17th and 18th. In the eastern portion the precipitation occurred in frequent showers, usually light, and was well distributed throughout the month, the most pronounced rainy periods being from the 13th to the 19th and from the 22d to the 28th.

As determined from the records of 354 stations, the average for the district is 2.99 inches, which is 0.91 inch above the normal amount. The greatest precipitation for the month was 14.35 inches at Trask, Oreg., and the least was 0.08 inch at Big Basin, Oreg., on the John Day River. The greatest amount recorded in 24 hours was 2.85 inches on the 18th at Wind River, Wash.

THE RIVERS.

The rivers throughout the district were higher than in April, the Columbia showing the greatest and the Willamette the least change. The Willamette and its tributaries averaged nearly normal or a little above, but the mean stage of the Columbia, although much higher than in April, was still below the normal for May. The latter averaged 14 feet, which is 2.7 feet lower than the normal; at the Cascade Locks it was 4.4 feet below the average and 3.2 feet below at The Dalles. The highest water occurred between the 21st and 28th and the lowest in nearly every case on the 1st.

The Willamette River averaged 5.9 feet, which is the normal stage for May. The river at Portland was 1.8 feet below the normal, the departure at this point being governed by the departure from normal in the Columbia River, and at Salem it was 0.1 foot below the normal. The mean stage at Portland was 5.9 feet higher than during April, due to the comparatively large increase in

the Columbia, but at other points on the Willamette the difference between this and last month's average was not great.

The Snake River averaged 9.1 feet, which is 0.9 foot below the May average.

MISCELLANEOUS.

Frosts occurred in many localities, but the damage was in most cases reported as being light. The wind movement was rather excessive and the sunshine deficient. Observers in the upper Columbia River Valley report more than the usual amount of snow in the high mountains. Hail and thunder storms were of frequent and general occurrence throughout the district, and sleet was also reported in many places. Fog prevailed along the coast on the 29th, 30th, and 31st. High winds occurred as follows: North Head, Wash., 78 miles from the southeast on the 17th; Tatoosh Island, Wash., 68 from the south on the 3d; Helena, Mont., 58 from the southwest on the 6th; Lewiston, Idaho, 54 from the west on the 5th; Pocatello, Idaho, 48 from the southwest on the 5th; Seattle, Wash., 34 from the southwest on the 1st, and Portland, Oreg., 32 from the south on the 18th. The prevailing direction of the wind for the district was from the southwest.

TABLE 1.—*Climatological data for May, 1911. District No. 12, Columbia Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana.																				
Anaconda	Deer Lodge	5,300	10	46.0	− 2.1	78	5	25	27	39	1.95			2.7		12	10	9		C. D. Demond.
Bison Mountain	Powell	7,240	2								2.34		0.90	25.0	10	13	14	4		C. H. Anderson.
Butte	Silver Bow	5,716	17	46.8	− 1.5	79	31	28	11	39	2.20	− 0.04	1.00	1.4	10	4	7	20	nw.	J. R. Wharton.
Columbia Falls	Flathead	3,190	16	47.9	− 3.1	88	31	21	7	50	2.28	− 0.92	0.58		12	5	9	17	s.	J. M. Grist.
Como **	Ravalli		3	50.8		79	5	31	11†	38	1.13		0.26	0	9	9	14	8		Hiram Platt.
East Anaconda	Deer Lodge	5,509	6	45.2		78	5	26	27	32	1.88		0.42	2.4	14	12	10	9	w.	C. D. Demond.
Fortine	Lincoln	2,975	6	46.9		83	31	21	1	45	2.77		0.56	3.0	17	4	5	22	w.	Mike Petery.
Hamilton	Ravalli	3,575	8	51.0		83	5	30	21	43	0.76		0.22	0	6	9	19	3	w.	Bitter Root Valley Irrig'n Co.
Hat Creek	Powell	6,000	2								2.56		0.45	7.1	14	6	11	14	w.	M. K. Landreth.
Kalispell	Flathead	2,965	13	48.7	− 2.3	83	31	28	7	18	0.96	− 1.07	0.34	T.	11	4	13	14	se.	U. S. Weather Bureau.
Lost Creek	Deer Lodge	5,200	2								1.57		0.40	6.0	8	16	6	9	w.	F. Henault.
McGinnis Meadows	Lincoln		2	44.8[i]		73	5	20	7	42[i]										H. L. Bebee.
Missoula	Missoula	3,225	32	50.8	− 2.9	86	5	27	7	45	1.00	− 1.10	0.37		13				sw.	U. S. Weather Bureau.
Ophir	Powell	8,800	2								1.72		0.64	T.	9	7	14	10	w.	E. S. Wilton.
Ovando	do	4,207	12	44.9	− 2.5	84	5	22	7	51	0.78	− 1.55	0.35	0	8	0	31	0	w.	S. B. Muchmore.
Philipsburg	Granite	5,275	8	46.2[i]		82	31	23	14	46[i]	2.61		0.45	T.	13	8[i]	3[i]	11[i]	sw.	G. T. Bramble.
Plains	Sanders	2,475	13	51.1	− 0.8	89	19	24	7	48	0.73	− 1.00	0.36	0	4	7	0	24	sw.	M. H. Pierce.
Pleasant Valley	Flathead	3,500	4	45.5		82	31	22	1	47	2.27		0.47	4.0	15	3	22	6	w.	A. D. Stillman.
Polson	do	2,920	4	50.6		77	31	30	10	35[b]	1.61		0.46		11					F. P. Brown.
Proctor	do	2,803	7	48.6[m]		85	31	30	23†	43										C. E. Proctor.
St. Ignatius	Missoula	2,700	6	50.1		78	5†	28	1	41	2.73		0.75	T.	14	7	10	14	nw.	U. S. Reclamation Service.
St. Regis	do	2,650	4	48.0		85	31	23	1	51	1.85		0.32	0	13	5	17	9	ne.	R. D. Lee.
Saltese	do	3,600	7								4.00		0.72	6.0	12	7	0	24	w.	E. K. Tarbox.
Snowshoe	Lincoln	4,500	5	42.4		74	31	24	7	30	6.95		1.11	26.5	24	7	4	20	w.	J. C. Riter.
Troy	do	1,880	17																	N. E. Milnor.
Willow Glen St'k Farm	Deer Lodge	5,064		45.8		80	4	24	26	44	2.03		0.53	T.	8	4	16	11	sw.	G. E. Luce.
Wyoming.																				
Afton	Uinta	6,200	7	46.9		79	5	22	7	45	2.05		0.52	0	8	14	4	13		A. V. Call.
Alta	do	7,000	1	44.3		74	31	21	7	44	3.95		1.75	8.5	13	10	12	9	s.	Mrs. Lucy Brown.
Bedford	do	5,900	11	45.9	− 0.3	79	31	20	7	47	2.36	− 0.22	0.82	0	8	11	11	9	w.	C. G. Heiner.
Belcher River	Yellowstone Park										1.10		0.60	11.0	2	11	2	18		U. S. Army.
Moran	Uinta			43.0		75	30†	21	7	45	0.72		0.70	T.	2	26	0	5	sw.	U. S. Reclamation Service.
Snake River	Yellowstone Park.	7,000		40.8		75	31	11	7	47	3.20		0.90	11.0	9	10	8	13	w.	U. S. Army.
Nevada.																				
San Jacinto	Elko		6	49.2		80	4	24	7†	47	1.59		0.86	T.	5	14	10	7	sw.	Mose Jones.
Utah.																				
Standrod	Boxelder		6	49.6		74	30	28	7†	37	0.96		0.44	1.0	8	13	4	14	sw.	T. B. Jones.
Idaho.																				
Almo	Cassia		3								1.02		0.58	0	11	9	12	10	s.	W. D. Cahoon.
Alpha	Boise		1	44.2		76	30	20	10	49	2.55		0.77	T.	12	15	11	5	sw.	J. W. King.
American Falls	Oneida	4,341	20	51.8[b]	− 1.6	84[d]	31	24	7	52[d]	1.93	+ 0.36	0.34	0	9	18	13	0	sw.	Harry W. Hall.
Blackfoot	Bingham	4,503	16	51.8	− 1.4	83	5	24	7	48	1.92	+ 0.43	0.68	0	8	10	20	1	sw.	E. A. Dowd.
Blackfoot Dam	Bannock		2	45.8		75	31	24	7†	40	3.16		0.56	12.5	13	12	5	14	s.	N. W. Irsfield.
Bogus Creek	Boise	4,200	3								4.15		1.14	1.5	10	9	19	3		F. P. Ingraham.
Boise	Ada	2,739	26	53.9	− 3.7	85	4	32	10	36	2.57	+ 1.28	1.65	0	10	9	11	11	se.	U. S. Weather Bureau.
Bonners Ferry	Bonner	1,850	5	49.0		90	31	26	7	52	2.37		0.67	0	13	7	18	6	sw.	W. H. Heideman.
Boulder mine	Boise	4,800	2								4.43		1.09	2.0	15	15	10	6		P. Moriarty.
Buhl	Twin Falls	3,800	5	54.8[b]		91	5	27	7	57	1.97		1.15	0	6				w.	Hugh Taylor.
Caldwell	Canyon	2,372	7	54.8		88	4	29	10	44	1.13		0.45	0	6	5	17	9	w.	W. J. Boone, D. D.
Camas	Fremont	4,815	3	53.3[f]		84	10†	24	12	50[f]	0.41		0.10		11					Mrs. Edna Faulkner.
Cambridge	Washington	2,651	16	51.0	− 4.5	85	31	28	1	46	1.87	+ 0.26	0.46	0	7	9	12	10	nw.	C. S. Shepherd.
Cedar Creek Dam	Twin Falls		1								1.54		0.61	0	6	8	19	4	nw.	Robert Hoffman.
Chesterfield	Bannock	5,424	15	49.3[c]	+ 0.6	78	8†	22	7	47[c]	1.09	− 0.72	0.29	T.	7	12	12	7	w.	C. S. West.
Clyde	Blaine		1	42.8[c]		69	31	21	28	33[c]	1.55		0.78	3.3	10	7[c]	13[c]	8[c]	s.	R. L. Sutcliffe.
Cottonwood Creek	Boise	4,000	2																	Frank Hedrick.
Council	Washington		1																	Dick Ross.
Culdesac	Nez Perce	1,520	3	54.2		85	31	32	5	42	5.63		1.10	0	15	6	5	20		R. R. Richmond.
Dent	Clearwater	1,350	5	53.6		92	31	28	1	53				0	20	5	15	11		E. Schuessler.
Driggs	Fremont	6,097	4	46.6		77	31	21	7	44	3.32		1.25	9.0	8	7	4	20	sw.	W. H. Durrant.
Edie	do		2	44.2		74	31	23	1†	45	2.52		0.61	0	7	11	13	7	s.	Geo. B. Edie.
Emmett	Canyon	2,350	4	54.0		88	4	28	10	48	2.47		0.77	0	9				nw.	C. P. Kar.
Forney	Lemhi		14	48.6	+ 0.1	82	31	21	7	52	0.18	− 1.71	0.09	3.2	3	6	9	16		M. B. Merritt.
Garden Valley	Boise	3,600	5								2.58		0.54	0	10	7	18	6	w.	Mrs. Gertrude M. Ross.
Garnet	Elmore	2,575	12	57.5	− 4.5	91	4	36	11	44	1.37	+ 0.74	0.77	0	3	20	7	4	e.	Asa A. Kenison.
Glenns Ferry	do	2,569	3	56.6		92	4	28	11	50	1.86		1.03	0	5	22	3	6	nw.	I. E. Perkins.
Gooding	Lincoln	3,572	2	53.3		86	4	26	11	45	1.77		1.04	0	8	16	9	6	w.	J. Krall, jr.
Grand Forks	Shoshone	3,000	3	46.6		83	31	27	1†	46	5.18		0.75	0	21	6	2	23	w.	Henry Kottkey.
Grandview	Owyhee		2	55.2		90	4	31	11	45	0.90		0.50	0	6	9	11	11	nw.	N. G. Massey.
Grimes Pass	Boise	5,200	2								4.08		1.24	2.9	14					J. M. Clarke.
Guffey	Owyhee	2,381	3	57.2		92	4	34	9†	42	1.12		0.79	0	5	17	13	1	w.	Fred Perry.
Hailey	Blaine	5,347	9	49.6		79	31	27	10	41	2.91		1.42	T.	11	9	17	5	ne.	U. S. Forest Service.
Hotspring	Owyhee	2,752	6	56.8		89	4	28	10	42	1.56		0.70	0	5	6	17	8		J. M. Waterhouse.
Idaho Falls	Bonneville	4,742	18	52.1	+ 0.4	84	5	26	7	46	2.29	+ 0.68	0.48	0	16	12	6	13	ne.	Dr. T. M. Bridges.
Indian Valley	Adams	2,999	3								2.02		0.69	0	10	14	7	10	n.	A. M. Henke.
Irwin	Bonneville	6,500	2	49.4		82	31	23	7	51	2.46		1.14	4.0	13	7	13	11	w.	Eva Johnston.
Kellogg	Shoshone	2,305	7	49.2		86	31	28	1†	49	5.29		0.63	0	20	5	3	23		W. McM. Huff.
Kirkham	Boise		2								3.57		0.80	0	8	10	9	12	w.	Mrs. Josie B. West.
Kooskia	Idaho	1,261	3	52.6		86	31	31	1	50	5.00		1.00	0	13	5	2	24		U. S. Forest Service.
Lakeview	Bonner	2,250	13	49.6	− 2.8	81	31	30	7	38	3.40	+ 0.69	0.43	0	16	5	5	21	sw.	E. D. Faust.
Landore	Adams	5,300	7	41.7		75	31	18	6	39	5.48		0.90	8.0	17	5	16	10		Mrs. Emma L. Brown.
Lewiston	Nez Perce	757	11	55.6	− 5.2	91	31	37	9	41	1.86	+ 0.23	0.30	0	12	2	14	15	e.	U. S. Weather Bureau.
Little Camas	Elmore	5,000	3																	Solon McCoy.
Long Gulch	do	4,500	3								3.33		1.24	0	11	13	15	3		Mrs. Elizabeth A. Hjort.
Loon Creek	Custer	6,000	7	43.8		76	31	19	7	51	2.95		1.06	T.	16	10	9	12	sw.	Mrs. Mary Williams.
Mackay	do	5,897	4	46.7		75	5†	25	10	41	0.71		0.35	0	3	21	4	6	nw.	U. S. Forest Service.
Meridian	Ada	2,657	1	54.3		87	4	29	10	44	1.89		1.12	0	9	7	15	9	nw.	A. W. Garrett.
Mesa	Adams	3,275	2	49.6[b]		84	31	28		32[i]				0					ne.	I. S. Carter.
Middle Fork	Idaho	1,250	2	53.8		85	31	36	6†	40	5.46		0.75	0	19	7	6	18		Jos. McGhee.
Milner	Twin Falls	4,110	7	51.2		82	4†	30	11	43	3.10		1.45	0	10				nw.	James K. Young.

TABLE 1.—*Climatological data for May, 1911. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Idaho—Continued.																				
Moscow	Latah	2,748	20	49.2	− 3.5	82	31	32	9†	37	2.17	− 0.26	0.44	0	14	4	18	9	nw.	University of Idaho.
Mountain Home	Elmore	3,150	6	52.8	.....	87	4	25	11	51	1.73	.....	0.78	0	7	6	16	9	nw.	Mrs. Ellen Manion.
Murtaugh	Twin Falls	.....	5	49.7[b]	.....	82	4†	25	7	49[b]	1.86	.....	0.66	0	8	.....	.....	.....	w.	J. E. Steinour.
Nezperce	Lewis	3,082	2	48.6	.....	79	31	28	9	41	3.88	.....	0.60	0	17	5	11	15	.....	P. Mitchell.
Oakley	Cassia	4,700	18	50.9	− 2.6	80	4†	30	8†	43	1.75	+ 0.65	1.15	0	6	12	15	4	s.	John Adams.
O'Hara Bar	Idaho	1,400	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. D. Agnew.
Orofino	Nez Perce	1,027	7	52.8	.....	88	31	30	7	47	6.20	.....	1.61	0	20	5	21	5	.....	Geo. Alteneder.
Payette	Canyon	2,159	20	54.1	− 5.2	89	4	30	10	46	1.41	+ 0.25	0.45	0	10	8	14	9	n.	E. F. Allen.
Peaceful Valley	....do	2,325	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. W. Newton.
Pebble	Bannock	5,277	3	48.4	.....	77	5†	22	7	45	2.33	.....	0.63	0.5	9	12	12	7	sw.	Mrs. Fannie Say.
Pierson	Custer	7,000	3	43.0	.....	72	30	12	6†	47	.....	.....	.....	.....	.....	13	1	17	s.	David P. Clarke.
Pleasant Valley	Ada	3,000	4	52.4	.....	85	4	25	10	47	1.78	.....	1.08	0	11	15	8	8	nw.	C. E. Friedrich.
Pocatello	Bannock	4,483	12	52.2	− 3.3	81	31	31	7	42	1.62	− 0.58	0.48	T.	13	11	13	7	se.	U. S. Weather Bureau.
Pocatello Nursery	....do	5,396	5	46.2	.....	78	5	21	7	47	2.11	.....	.....	.....	.....	16	4	11	sw.	Mrs. Anna M. Wrensted.
Porthill	Bonner	1,665	22	50.4	− 3.4	80	31	29	7	42	1.93	− 0.13	0.30	0	13	6	8	17	.....	H. A. French.
Pyle Creek	Boise	3,100	2	.....	.....	.....	.....	.....	.....	.....	2.55	.....	0.57	0	14	8	15	8	s.	P. V. Smith.
Richfield	Lincoln	.....	2	52.0	.....	82	4	24	11	44	2.12	.....	0.70	T.	10	15	12	4	w.	Idaho Irrigation Co.
Roseberry	Boise	.....	1	44.0	.....	76	31	22	25	45	1.42	.....	0.28	.....	10	.....	.....	.....	.....	Rev. H. F. Barstow.
Roseworth	Twin Falls	.....	2	.....	.....	.....	.....	.....	.....	.....	1.28	.....	0.55	T.	6	1	25	5	nw.	D. B. Hartwell.
Rupert	Lincoln	4,204	5	52.0	.....	82	5†	26	7†	48	0.98	.....	0.45	T.	7	18	6	7	w.	Will Parry.
St. Maries	Kootenai	2,263	15	51.0	− 3.0	84	31	32	7†	39	4.25	+ 1.63	1.16	0	17	7	7	17	sw.	J. S. Turnbull.
Salmon	Lemhi	4,040	6	51.3	.....	82	5	29	10	43	0.30	.....	0.13	0	6	8	23	0	w.	B. C. d'Easum.
Salmon River Dam	Twin Falls	.....	4	49.4	.....	80	4	23	7	56	1.50	.....	0.80	1.0	8	12	7	12	s.	A. M. Gilbert.
Sandpoint	Bonner	2,086	1	49.7	.....	85	31	25	1	46	4.36	.....	0.70	0	18	6	4	21	s.	J. H. Edgerton.
Shoshone	Lincoln	3,968	4	52.2	.....	83	4	28	11	41[a]	1.98	.....	1.00	0	9	.....	.....	.....	w.	O. A. Truman.
Silver City	Owyhee	6,280	4	.....	.....	.....	.....	.....	.....	.....	3.96	.....	2.05	5.0	11	8	17	6	s.	A. D. Bradfield.
Smith Ranger Station	Bonner	1,900	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. D. Crittenden.
Soldier Creek	Blaine	.....	1	47.4[a]	.....	74	31	26	27	39	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Minear.
Spirit Lake	Kootenai	.....	2	49.2	.....	86	31	25	1†	47	3.79	.....	0.77	0	17	17	6	8	ne.	M. C. Krause.
Springfield	Bingham	4,420	3	52.1	.....	83	5	25	7†	49	2.03	.....	0.45	0	10	9	15	7	sw.	Mrs. W. A. Edwards.
Sugar	Fremont	.....	4	50.0	.....	80	5	25	7	43	1.44	.....	0.43	0	7	9	6	16	sw.	Utah-Idaho Sugar Co.
Sunnyside	Elmore	.....	2	51.8	.....	85	4	29	10	41	1.63	.....	1.05	0	5	.....	.....	.....	nw.	E. A. Wilmot.
Tripod Mountain	Boise	4,300	2	.....	.....	.....	.....	.....	.....	.....	2.91	.....	0.75	T.	9	10	11	10	.....	Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	6	51.2	.....	82	30†	26	7†	51	1.74	.....	0.94	0	9	5	25	1	w.	J. A. Waters.
Vernon	Fremont	.....	14	49.6	+ 0.6	80	5†	24	11	43	2.0[illegible]	+ 0.83	0.82	1.2	9	12	16	3	sw.	A. M. Slatery.
Wallace	Shoshone	2,728	4	49.2	.....	87	31	30	7†	44	4.84	.....	0.79	.....	22	.....	.....	.....	e.	U. S. Weather Bureau.
Wendell	Lincoln	3,400	3	54.4	.....	86	4	28	11	45	2.00	.....	1.08	0[illegible]	10	12	12	7	w.	Chas. L. Dingler.
Washington.																				
Aberdeen	Chehalis	162	20	49.6	− 3.1	78	29	34	11	37	8.12	+ 3.77	1.73	0	16	5	21	5	w.	C. S. Weatherwax
Anacortes	Skagit	60	17	51.2	.....	72	31	31	2	39	3.08	+ 1.09	0.72	0	13	11	17	3	.....	Douglass Allmond.
Baker	....do	200	5	54.0	.....	82	29	35	20	38	4.03	.....	0.90	0	14	8	8	15	.....	Robert M. White.
Bellingham	Whatcom	60	16	52.9	− 0.7	78	29	37	20†	39	2.60	+ 0.18	0.70	0	14	14[a]	11[a]	5[a]	.....	Sanford B. Mayhew.
Bellingham, near	....do	.....	.....	51.8	.....	75	29	36	20	30	2.67	.....	0.83	0	15	13	8	10	se.	U. S. Bureau Plant Industry.
Beverly	Grant	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Harry B. Averill.
Blaine	Whatcom	57	14	51.9	− 0.1	72	31	35	20	30	3.05	+ 0.10	1.14	0	12	4	21	6	se.	John W. Sheets.
Blewett	Chelan	2,200	1	.....	.....	.....	.....	.....	.....	.....	2.28	.....	0.45	0	10	13[i]	0[i]	8[i]	.....	John Burmeister.
Bremerton	Kitsap	30	.....	.....	.....	.....	.....	.....	.....	.....	2.78	.....	0.84	0	14	.....	.....	.....	.....	U. S. Navy Yard.
Brewster	Okanogan	1,620	1	54.4	.....	90	31	35	6	36	1.90	.....	0.65	0	9	10	19	2	sw.	Mrs. H. F. Bertram.
Bumping Lake	Yakima	3,400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
Cedar River	King	535	4	.....	.....	.....	.....	.....	.....	.....	6.52	.....	1.23	0	14	8	7	16	.....	George Landsburg.
Centralia	Lewis	212	18	52.6	− 2.1	86	31	32	20	47	4.52	+ 1.97	0.77	0	13	7	18	6	s.	I. S. Turner.
Cheney	Spokane	2,351	12	50.0	.....	80	31	30	6	41	1.66	− 0.41	0.36	0	14	10	0	21	w.	J. E. Buchanan.
Cle Elum	Kittitas	1,930	12	48.1	− 2.6	88	31	25	1†	48	2.83	+ 1.86	0.83	0	11	16	8	7	sw.	J. A. Balmer.
Clearbrook	Whatcom	140	8	51.0	.....	80	29	29	20	44	3.75	.....	0.86	0	14	2	12	17	sw.	George Gibbs.
Clearwater	Jefferson	135	15	.....	.....	78	5†	.....	.....	.....	.....	.....	.....	.....	.....	9	4	18	.....	C. A. Bullard.
Colfax	Whitman	2,300	22	.....	.....	84[d]	31	.....	.....	.....	1.72	− 0.09	.....	.....	.....	.....	.....	.....	.....	I. B. Doolittle.
Colville	Stevens	1,635	11	52.6	− 2.5	90	31	28	1†	48	2.45	+ 0.54	0.59	0	16	6	7	18	sw.	W. L. Sax.
Conconully	Okanogan	2,300	11	51.8	− 2.5	85	31	29	23	40	4.34	+ 2.54	1.10	0	16	9	4	18	n.	Wm. Baines.
Cowiche	Yakima	.....	.....	53.6[a]	.....	88[b]	31	31	6	34	2.12	.....	1.07	0	8	8	11	12	nw.	U. S. Reclamation Service
Crescent	Lincoln	2,250	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Otto Wollweber.
Davenport	....do	2,450	2	50.4	.....	84	31	31	6†	40	1.33	.....	0.27	0	12	19	4	8	sw.	James L. Thayer.
Dayton	Columbia	1,700	25	53.6	− 2.5	84	31	33	20	37	2.53	+ 0.62	0.77	0	10	10	15	6	.....	W. W. Hendron.
Deer Park	Spokane	.....	.....	47.7[c]	.....	90	31	28	29	50	.....	.....	.....	.....	.....	1[c]	9[c]	62[c]	sw.	James Mills.
Detroit	Mason	30	3	52.8	.....	94	31	36	11†	49	4.35	.....	1.06	0	15	7	15	9	sw.	Walter O. Eckert.
Dixie	Walla Walla	5,000	2	.....	.....	.....	.....	.....	.....	.....	7.68	.....	2.15	4.0	14	6	4	21	se.	T. Z. Andrews.
Dryden	Chelan	960	.....	.....	.....	.....	.....	.....	.....	.....	1.33	.....	0.54	0	9	15	11	5	nw.	Valley Power Co.
Duckabush	Jefferson	380	3	52.4[a]	.....	83	31	33	10†	40[a]	.....	.....	.....	0	.....	4[a]	4[a]	9[a]	.....	E. G. Newman.
Eastsound	San Juan	500	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. E. Harrison.
Ellensburg	Kittitas	1,571	23	51.8	− 3.1	82	30	30	1†	45	1.54	+ 0.86	0.46	0	7	11	7	13	nw.	R. Lee Barnes.
Ephrata	Grant	1,265	8	57.0	.....	92	31	34	11†	46	1.90	.....	1.10	0	.....	9	16	6	.....	T. J. Cook.
Forks	Clallam	480	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. A. Markham.
Fort Simcoe	Yakima	1,427	17	51.8	− 7.3	90	31	26	10	45	4.25	+ 3.51	1.80	0	7	15	11	5	sw.	Dr. F. H. Monk.
Goat Lake	Snohomish	2,900	2	.....	.....	.....	.....	.....	.....	.....	6.72	.....	1.20	3.5	19	.....	.....	.....	.....	C. M. Macintosh.
Gold Basin	....do	.....	.....	49.2	.....	79	31	30	1†	44	9.68	.....	1.56	0	16	14[a]	7[a]	9[a]	nw.	U. S. Forest Service.
Gold Creek	Yakima	2,600	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. W. Anderson.
Goldendale	Klickitat	1,600	5	52.2	.....	89	31	31	1	48	3.03	+ 2.04	1.03	T.	12	7	18	6	w.	KlickitatCountyAbstractCo.
Granite Falls	Snohomish	397	8	.....	.....	.....	.....	.....	.....	.....	6.84	.....	1.44	0	15	6	13	12	nw.	C. H. Cleaver.
Hatton	Adams	1,100	6	54.0	.....	94	31	26	10	47	1.19	.....	0.54	0	9	6	3	22	sw.	Dr. A. V. Marion.
Huntsville	Columbia	1,400	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. S. J. Hill.
Irene Mountain	Okanogan	3,015	2	.....	.....	.....	.....	.....	.....	.....	3.52	.....	0.98	0	17	5	14	12	sw.	Mrs. Manda S. Shain.
Kennewick	Benton	367	16	59.6	− 3.6	99	31	33	6	45	0.65	+ 0.15	0.24	0	8	.....	.....	.....	.....	R. E. Reed.
Kettle Falls	Stevens	1,265	2	54.8	.....	93	31	31	1†	57	2.70	.....	0.62	0	15	7	18	6	.....	Harry H. Cole.
Kiona	Benton	430	6	57.4	.....	92	31	32	7	40	0.48	.....	0.16	0	5	15	9	7	sw.	Dr. F. S. Hedger.
Kosmos	Lewis	775	5	51.8	.....	87	31	32	11	46	5.00	.....	0.86	0	18	5[a]	19[a]	6[a]	n.	J. A. Ulsh.
La Center	Clarke	250	14	49.8	− 5.0	82	30†	32	11	42	5.67	+ 2.34	1.31	T.	13	7	15	9	sw.	Joseph Bros.
Lacrosse	Whitman	1,400	2	52.3	.....	87	31	27	11	46	3.25	.....	0.93	0	14	12	9	10	sw.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	2	.....	.....	.....	.....	.....	.....	.....	2.97	.....	0.78	0	11	4	13	14	nw.	U. S. Reclamation Service.
Lake Kachess	....do	2,235	3	46.6	.....	82	31	29	6†	44	3.65	.....	1.04	0	10	10	12	9	e.	Do.
Lake Keechelus	....do	2,479	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Lakeside	Chelan	1,116	20	56.3	− 2.0	91	31	39	6†	38	1.21	+ 0.11	0.64	0	8	5	16	10	w.	W. H. Van Meter.
Laurel	Klickitat	1,900	2	.....	.....	.....	.....	.....	.....	.....	4.31	.....	1.09	2.0	9	9	18	4	w.	Mrs. Minnie E. Strout.
Laurier	Ferry	1,644	1	53.6	.....	92	31	30	1†	49	3.27	.....	0.66	0	16	7	5	19	se.	Mrs. J. S. Myers.
Lester	King	1,614	7	49.8	.....	82	30	29	11	45	3.90	.....	1.15	0	10	6	5	20	w.	W. W. Clabough.
Lone Tree	Chehalis	14	2	49.7	.....	60	29	42	6†	15	6.49	.....	1.73	0	18	2	14	15	nw.	U. S. Engineer Corps.

TABLE 1.—*Climatological data for May, 1911. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.	Number of rainy days, 0.01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	Prevailing wind direction.	
Washington—Contd.																			
Longmires Springs	Pierce	2,800	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	National park ranger.
Lost Creek	Okanogan	3,125	2	.....	.....	.....	.....	.....	.....	.....	3.37	.....	0.64	0	13	4	13	14	se.	P. H. Leese.
Lucerne	Chelan	1,100	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Barbara Schearer.
McConihe	Grant	.....	.....	57.0	.....	93	31	35	14	43	1.18	.....	0.57	0	10	9	6	16	s.	Paul M. McConihe.
McCumber's ranch	Yakima	2,182	2	.....	.....	.....	.....	.....	.....	.....	3.50	.....	1.10	0	8	8	14	9	sw.	Mrs. Mary McCumber.
Mottinger	Benton	307	11	59.6	− 3.1	93	31	39	11†	39	1.35	+ 0.40	0.29	0	10	20	7	4	w.	G. H. Mottinger.
Mount Pleasant	Clallam	.....	.....	48.3	.....	75	31	34	11†	30	3.25	.....	0.79	0	11	10	4	17	.....	Wm. M. Dorr.
Moxee	Yakima	1,000	19	54.8	− 3.2	95	31	30	6†	48	0.99	+ 0.19	0.29	0	10	7	14	10	w.	H. B. Scudder.
Newport	Stevens	2,400	1	49.2	.....	86	31	25	1	48	2.88	.....	0.38	0	17	5	20	6	sw.	Charles M. Talmadge.
North Head	Pacific	211	9	47.8	− 3.4	58	29	42	5	10	5.14	+ 2.75	1.23	0	17	2	7	22	nw.	U. S. Weather Bureau.
Northport	Stevens	1,350	12	54.6	.....	92	31	33	6†	44	2.41	+ 0.37	0.43	0	18	9	4	18	.....	Frank Janneck.
North Yakima	Yakima	1,070	2	56.9	.....	94	31	30	6	43	1.10	.....	0.34	0	9	12	9	10	nw.	Albert Bender.
Nutland	Klickitat	.....	2	56.8	.....	97	31	39	12	45	0.72	.....	0.27	0	7	.....	.....	.....	.....	Ruth J. Shepard.
Odessa	Lincoln	1,540	8	54.6	.....	90	31	30	7†	44	1.35	.....	0.73	0	7	5	12	14	sw.	Wm. U. Neeley.
Olga	San Juan	50	21	51.6	− 1.2	68	24†	40	1†	21	3.10	+ 1.04	1.04	0	11	10	12	9	se.	Cecil S. Willis.
Olympia	Thurston	200	33	52.2	− 2.5	86	31	32	20	47	4.09	+ 1.45	1.04	0	12	8	11	12	sw.	M. O'Connor.
Omak	Okanogan	850	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. G. Tait.
Oroville	do	922	2	55.6	.....	96	31	31	27	48	2.35	.....	0.46	0	10	8	14	9	s.	E. M. Stansbury.
Peola	Garfield	5,000	2	.....	.....	.....	.....	.....	.....	.....	2.75	.....	0.51	4.7	17	9	9	13	sw.	Samuel Gruell, sr.
Pomeroy	do	1,500	19	52.2	− 5.0	84	31	31	8	41	2.20	+ 0.33	0.47	0	14	4	14	13	w.	Peter McClung.
Port Crescent	Clallam	259	16	47.5	− 1.6	67	24	33	11	29	2.89	+ 0.58	0.75	0	16	2	18	11	w.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	21	51.4	− 2.0	74	29†	37	1	28	2.93	+ 1.04	0.80	0	10	9	7	15	nw.	Frank Plummer.
Pullman	Whitman	2,550	19	48.9	− 4.0	83	31	32	9	37[b]	2.39	+ 0.54	0.82	0	14	7	11	13	sw.	State Agricultural College.
Quiniault	Chehalis	300	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. V. Higley.
Republic	Ferry	2,628	11	48.8	− 3.1	83	31	26	1†	51	3.75	.....	0.75	0	17	7	6	18	s.	Geo. B. Stocking.
Rex Creek	Chelan	1,135	4	54.4[d]	.....	83	31	38	6	33[d]	1.06	.....	0.40	0	7	3[e]	10[e]	13[e]	nw.	James W. Nicol.
Ritzville	Adams	1,825	12	.....	.....	.....	.....	.....	.....	.....	2.04	+ 1.27	0.58	0	14	.....	.....	.....	.....	Agent, Northern Pacific Ry.
Rock Lake	Whitman	1,910	5	52.9	.....	90	31	30	11	47	1.99	.....	0.48	0	13	6	9	16	sw.	P. M. Ramsey.
Rosalia	do	2,425	19	50.3	− 2.3	85	31	31	6†	39	2.64	+ 0.58	0.42	T.	16	6	8	17	sw.	Hans Mumm.
Russell's ranch	Yakima	2,870	2	.....	.....	.....	.....	.....	.....	.....	3.52	.....	1.80	11.0	11	5	19	7	w.	Miss Maggie M. Russell.
Seattle	King	123	20	52.7	− 2.3	78	29	40	11	29	2.48	+ 0.16	0.54	0	18	6	9	16	s.	U. S. Weather Bureau.
Sedro Woolley	Skagit	38	14	53.8	− 1.2	85	29	34	1†	44	5.56	+ 2.32	1.67	0	18	8	10	13	.....	Mrs. H. L. Devin.
Sixprong	Klickitat	1,240	4	57.0	.....	92	31	34	6	37	1.02	.....	0.31	0	8	13	1	17	sw.	C. E. Comstock.
Skagit Power Dam	Whatcom	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Skagit Power Co.
Snohomish	Snohomish	100	17	52.6	− 2.1	82	29†	34	20	42	3.14	− 0.22	0.52	0	16	11	1	19	nw.	Warren Hodge.
Snoqualmie Falls	King	667	12	54.1	.....	86	30†	34	11	43	6.78	+ 2.26	1.45	0	16	10	5	16	.....	O. N. Wiswell.
Snyder's ranch	Okanogan	2,200	2	49.2	.....	84	30	27	1†	47	2.09	.....	0.50	0	9	11	18	2	e.	G. M. Snyder.
South Bend	Pacific	.....	16	50.2	− 3.0	78	29†	34	20	39	7.83	+ 3.10	1.75	0	17	5	15	11	w.	Miss Winifred Eichner.
Spokane	Spokane	1,943	30	52.5	− 3.6	87	31	33	7	39	1.33	− 0.29	0.30	0	12	4	9	18	sw.	U. S. Weather Bureau.
State University	King	170	2	52.1	.....	77	29†	40	11†	29	2.35	.....	0.48	0	15	11	4	16	s.	University of Washington.
Stoke's ranch	Okanogan	2,679	2	.....	.....	.....	.....	.....	.....	.....	2.72	.....	0.77	0.5	10	7	15	9	nw.	Charles W. Gunn.
Sumner	Pierce	77	3	51.2	.....	78	29	33	11	40	3.60	.....	0.55	0	17	6	6	19	sw.	H. E. Thompson.
Sunnyside	Yakima	740	16	55.8	− 2.6	90	31	31	23	42	1.01	+ 0.43	0.24	0	11	11	14	6	nw.	U. S. Reclamation Service.
Tacoma	Pierce	213	25	52.2	− 2.3	76	29	36	11	30	3.18	+ 0.64	0.92	0	18	7	7	17	sw.	U. S. Weather Bureau.
Tatoosh Island	Clallam	86	26	48.0	− 1.6	66	24	40	6	21	4.25	+ 0.16	1.24	0	13	6	6	19	s.	Do.
Tieton	Yakima	2,000	2	48.7	.....	86	31	28	6	40	3.60	.....	1.78	0	10	6	14	11	w.	U. S. Reclamation Service.
Tonasket	Okanogan	945	.....	56.5	.....	92	31	35	6†	41	2.43	.....	0.59	0	12	9	12	10	n.	E. H. Twight.
Touchet	Walla Walla	556	4	56.4	.....	90	31	30	7	47	1.75	.....	0.48	0	14	11	9	11	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	2	.....	.....	.....	.....	.....	.....	.....	8.60	.....	2.10	9.5	11	11	8	12	sw.	R. H. King.
Trinidad	Douglas	900	7	58.4	.....	93	31	37	6	35	0.84	.....	0.18	0	7	17	10	4	nw.	J. C. Wheeler.
Vancouver	Clarke	100	36	54.2	− 3.4	86	31	35	11	39	4.08	+ 1.67	1.31	0	14	6	7	18	nw.	A. A. Quarnberg.
Vashon Island	King	40	22	52.7	− 1.3	78	29†	38	6	34	3.79	+ 1.48	0.73	0	17	9	2	20	s.	Miss Gertrude McClintock.
Wahluke	Grant	410	7	59.4	.....	95	31	37	7†	42[a]	0.51	.....	0.17	0	5	10[a]	12[a]	8[a]	.....	F. C. Koppen.
Wallace	Okanogan	4,000	2	.....	.....	.....	.....	.....	.....	.....	4.60	.....	1.02	0	16	6	12	13	s.	G. A. Wallace.
Walla Walla	Walla Walla	1,000	27	56.4	− 4.3	89	31	39	9	36	3.64	+ 1.81	0.98	0	15	10	6	15	s.	U. S. Weather Bureau.
Washougal	Skamania	650	11	51.8	− 2.6	82	30	35	11†	35	6.52	+ 2.59	1.25	0	17	8	7	16	w.	F. M. Grout.
Waterville	Douglas	2,624	21	50.2	− 3.2	87	31	26	6	43	1.84	+ 0.52	0.84	0	8	13[a]	8[a]	9[a]	w.	O. R. Hopewell.
Wenatchee, near	Chelan	1,169	12	52.0	− 3.5	85	31	33	6	30	1.42	+ 0.60	0.47	0	11	7	13	11	w.	George A. Pitcher.
White Salmon	Klickitat	.....	.....	54.2	0	89	30	36	11	41	2.81	.....	0.72	0	14	8	10	13	w.	C. W. J. Reckers.
Wilbur	Lincoln	2,203	12	52.8	.....	90	31	26	7	50	2.06	+ 0.56	0.65	0	11	8	6	17	sw.	R. J. Reeves.
Wind River	Skamania	.....	.....	50.2	.....	87	31	32	11†	46	9.87	.....	2.85	1.0	16	6	9	16	nw.	U. S. Forest Service.
Winthrop	Okanogan	.....	.....	54.7	.....	98	31	30	2†	52	3.55	.....	1.60	0	9	12[a]	2[a]	16[a]	.....	Methow Trading Co.
Yale	Cowlitz	375	4	52.8	.....	87	30	32	20†	39	11.28	.....	2.25	T.	19	8	11	12	sw.	J. A. Williams.
Zillah	Yakima	.....	.....	56.4	.....	93	31	31	7†	45	0.70	.....	0.26	0	8	14	13	4	w.	C. G. Ware.
Zindel	Asotin	715	9	60.8	.....	87	29	37	10	44	2.19	.....	0.55	0	9	8	12	11	n.	M. W. Zindel.
Oregon.																				
Albany	Linn	212	30	.....	.....	.....	.....	.....	.....	.....	2.85	+ 0.45	0.62	18	18	.....	.....	.....	.....	F. M. French.
Ashland	Jackson	1,963	28	53.8	− 3.1	85	30	31	6	40	1.71	+ 0.04	0.65	0	8	3	18	10	w.	G. G. Eubanks.
Astoria	Clatsop	16	51	50.6	− 4.7	73	29	38	20	30	6.88	+ 3.08	1.53	0	21	8	8	15	nw.	Irving Club.
Baker	Baker	3,466	21	47.6	− 2.7	81	31	27	9	39	1.47	− 0.26	0.73	1.0	13	5	17	9	se.	U. S. Weather Bureau.
Bay City	Tillamook	14	17	49.5	− 2.5	70	29	34	11†	31	8.16	+ 2.40	1.29	0	12	11	4	16	sw.	John O. Bozorth.
Beech Creek	Grant	4,500	.....	47.4	.....	90	11	20	6	65	2.25	.....	0.40	3.0	11	11	8	12	n.	G. G. Carson.
Bend	Crook	3,629	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Bend Bulletin.
Black Butte	Lane	1,200	10	47.0	− 6.2	77	30	30	11	36	5.55	+ 2.10	0.95	0	16	12	4	15	nw.	Wm. Harris.
Blalock	Gilliam	237	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. W. Long.
Brogan	Malheur	2,600	.....	54.3	.....	87	31	30	6	35	0.39	.....	0.25	0	2	16	8	7	w.	A. B. Cox.
Burns	Harney	4,157	20	45.9	− 2.9	78	31	17	6	42	0.75	− 0.04	0.22	0	8	7	20	4	sw.	J. C. Welcome, jr.
Cascade Locks	Hood River	100	21	53.4	− 3.4	83	30	36	11	39	6.95	+ 3.41	1.13	0	16	9	4	18	w.	Val W. Tomkins.
Cazadero	Clackamas	503	2	53.4	.....	85	29	34	20	40	5.27	.....	0.97	0	18	7	7	17	se.	Alf. Drill.
Cliff	Lake	4,390	4	43.8	.....	76	30	13	25	53	0.64	.....	0.23	0	7	5	8	18	n.	John C. Green.
Condon	Gilliam	2,884	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Williams.
Corvallis	Benton	266	23	51.0	− 4.0	84	30	32	8	42	4.21	+ 1.96	0.77	0	15	8	7	16	sw.	Oregon Agricultural College.
Dayville	Grant	2,200	17	51.2	− 4.3	85	31	27	9	48	0.99	− 0.33	0.22	T.	8	2	6	23	nw.	Dr. J. Campbell Martin.
Deadwood	Lane	350	1	51.7	.....	88	30	36	23	46	8.55	.....	2.02	0	17	7	7	17	sw	Jos. Slemmons.
Doraville	Columbia	600	10	49.9	− 2.8	80	30	34	20	36	4.79	+ 1.92	1.21	0	20	7	6	18	nw.	Jos. Hackenberg.
Drain	Douglas	300	9	53.4	.....	86	30	34	11†	45	3.26	.....	0.87	0	15	9	9	13	sw.	Ira Wimberly.
Echo	Umatilla	625	7	56.7	.....	92	31	33	6†	41	1.54	.....	0.44	0	9	10	5	16	w.	R. B. Stanfield.
Ella	Morrow	830	7	55.6	.....	85	31	30	5	42	0.71	+ 0.02	0.20	0	9	17	10	4	sw.	Carl F. Troedson.
Eugene	Lane	449	21	51.9	− 2.8	82	31	34	19†	33	3.15	+ 0.70	1.04	0	16	11	9	11	nw.	F. L. Barker.
Fairview	Coos	142	15	49.2	− 3.7	76	27	33	7	31	4.89	+ 0.87	1.08	0	16	9	2	20	sw.	Wm. Bettys.
Falls City	Polk	355	14	51.4	− 1.6	87	30	32	22†	40	5.92	+ 3.00	1.95	0	15	13	5	13	e.	Chas. B. Vick.
Forest Grove	Washington	220	22	52.3	− 3.2	85	31	31	24	47	4.42	+ 2.39	1.21	0	17	1	14	16	n.	Pacific University.
Gardiner	Douglas	72	21	50.4	− 3.7	77	29	37	2†	31	6.71	+ 1.88	1.50	0	18	.....	.....	.....	.....	J. S. Gray.
Glendale	do	1,441	7	56.5	.....	88	20	36	1†	45	1.80	.....	1.20	0	5	16	7	8	nw.	B. J. Simpson.

TABLE 1.—*Climatological data for May, 1911. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, years.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, 0.01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall, unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon—Continued.																				
Glenora	Tillamook	575	20	49.2	− 3.0	85	30	32	22	46	12.15	+ 5.85	2.31	0	16	5	6	20	nw.	Mrs. Jennie A. Reeher.
Gold Beach	Curry	40	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. Dewey.
Granite	Grant	2,680	6	42.7	.....	75	31	23	9†	46	1.35	.....	0.30	T.	9	5	14	12	nw.	L. N. Ford.
Grants Pass	Josephine	956	23	54.0	− 2.7	89	30	28	1	48	1.17	− 0.68	0.46	0	9	7	5	19	sw.	John B. Paddock.
Grass Valley	Sherman	2,381	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Agent O.-W. R. & N. Co.
Headworks	Clackamas	719	9	53.0	.....	83	30	35	11	31	7.78	+ 1.96	1.19	0	22	7	10	14	s.	Portland Waterworks.
Heppner	Morrow	1,950	21	51.8	− 3.1	84	31	30	6	36	2.04	+ 0.44	0.68	0	12	9	4	18	w.	Ralph M. Kenton.
Hermiston	Umatilla	451	4	57.4	.....	92	31	30	3	48	1.51	.....	0.28	0	9	16	13	2	.....	C. W. Kellogg.
Hermoso Rio	Crook	.....	.....	49.9	.....	86	31	27	13	44	1.27	.....	0.53	0	9	12	9	10	e.	Carl T. Hubbard.
Hood River	Hood River	300	21	52.2	− 3.2	88	30	31	11	44	2.61	+ 1.41	0.70	0	12	12	3	16	w.	H. L. Hasbrouck.
Huntington	Baker	2,105	10	58.6	.....	84	10†	35	2	44	0.31	.....	0.20	0	4	5	20	6	w.	L. Connell.
Jacksonville	Jackson	1,640	23	53.8	− 2.6	86	30	32	6	42	1.60	− 0.19	0.46	0	6	10	8	13	.....	E. Britt.
Joseph	Wallowa	4,400	22	45.9	− 2.6	80	30	25	9	51	3.89	+ 1.91	0.65	4.0	13	4	6	21	s.	F. F. McCully.
Klamath Agency	Klamath	4,109	3	50.6	.....	77	30	29	1†	43	0.13	.....	0.05	1.3	3	18	7	6	s.	Edson C. Watson.
Klamath Falls	do	4,100	22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Heileman.
La Grande	Union	2,784	24	49.2	− 4.7	83	31	29	11†	43	3.86	+ 1.67	0.53	0	18	10	7	14	w.	W. A. Worstell.
McKenzie Bridge	Lane	1,400	10	49.9	− 4.1	87	30	26	20	55	5.91	+ 1.62	1.45	0	21	8	0	23	sw.	Geo. Frissell.
McMinnville	Yamhill	182	24	52.8	− 2.4	86	30	34	11†	41	2.85	+ 0.80	0.77	0	14	11	5	15	sw.	J. H. Pruett.
Marshfield	Coos	34	10	49.4	− 4.0	69	29	35	11	27	5.36	.....	0.89	0	21	.....	.....	.....	sw.	U. S. Weather Bureau.
Medford	Jackson	.....	.....	55.0	.....	90	30	31	6	48	1.49	.....	0.53	0	7	8	13	10	nw.	Mrs. Belle O'Gara.
Merrill	Klamath	4,070	5	47.4	.....	80	30	22	9	44	0.78	.....	0.28	0	5	15	2	14	.....	Mrs. Agnes Ritchson.
Metolius	Crook	.....	.....	49.0	.....	87	31	23	23†	49	3.90	.....	0.24	0	10	11	8	12	sw.	W. E. Sottman.
Mikkalo	Gilliam	1,400	5	53.5	.....	89	31	30	6	43	0.45	.....	0.19	0	5	9	12	10	w.	Frank Little.
Miramonte Farm	Clackamas	195	23	53.5	− 2.3	86	30	35	19†	40	.....	.....	.....	0	.....	8	9	14	sw.	G. Muecke.
Monroe	Benton	350	14	52.4	− 1.8	82	30	32	11	37	3.63	+ 1.68	1.08	0	16	8	6	17	sw.	L. A. Peek.
Mount Angel	Marion	485	25	54.0	− 2.7	84	30	39	20	35	4.75	+ 1.96	0.82	0	14	9	8	14	w.	Dr. Urban Fisher.
Mount Hood	Hood River	1,650	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. G. Babson.
Musick	Douglas	5,000	2	41.0	.....	70	30	25	10	30	11.21	.....	2.00	34.0	20	10	4	17	sw.	Alex. Lundberg.
Newport	Lincoln	69	24	49.8	− 2.5	64	28†	37	24	21	5.57	+ 1.14	0.90	0	19	7	11	13	nw.	Wm. Matthews.
North Bend	Coos	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	High School.
Paisley	Lake	4,500	8	48.7	.....	77	21	26	6	37	0.10	.....	0.10	0	1	12	15	4	w.	E. C. Woodward.
Paulina	Crook	.....	.....	45.0	.....	78	30†	20	25	49	1.81	.....	0.40	1.7	13	7	2	22	n.	Orrin C. Mills.
Pendleton	Umatilla	1,070	22	55.4	− 2.5	92	31	28	11	50	1.47	+ 0.08	0.39	0	9	8	21	2	w.	E. F. Averill.
Pilot Rock	do	1,817	3	54.3	.....	88	31	30	6	52	1.68	.....	0.33	0	14	4	21	6	sw.	John P. McManus.
Pompeii	Clackamas	3,879	16	41.0	− 2.2	74	30†	26	11	35	7.40	+ 1.82	1.90	32.0	19	6	7	18	sw.	O. C. Yocum.
Portland	Multnomah	57	41	54.3	− 2.5	84	30	39	24	32	3.95	+ 1.59	1.02	0	18	4	7	20	nw.	U. S. Weather Bureau.
Port Orford	Curry	80	6	49.8	.....	73	29	32	10	24	7.15	.....	1.54	0	15	13	5	13	n.	J. D. Loucks.
Prineville	Crook	2,864	15	48.8	− 4.4	73	10	22	18†	34	1.16	+ 0.24	0.40	0	9	8	18	5	nw.	George Summers.
Prospect	Jackson	2,800	5	49.2	.....	86	30	25	10	53	4.45	.....	0.91	3.0	14	5	18	8	w.	E. F. Graham.
Ramsey	Wasco	1,350	10	50.6	.....	86	31	26	23	40	1.27	.....	0.25	0	11	15	0	16	e.	Mrs. Iva B. Collins.
Range	Grant	3,500	3	.....	.....	.....	.....	.....	.....	.....	0.28	.....	0.05	0	12	6	10	15	.....	Mrs. Emma Arbuckle.
Redmond	Crook	.....	.....	48.8	.....	85	31	24	9	64	.....	.....	.....	.....	.....	21	3	7	w.	E. E. Foote.
Richland	Baker	2,350	10	51.4	.....	86	31	27	10	45	1.34	.....	0.53	0	7	11	10	10	sw.	L. G. Morgan.
Riverside	Malheur	3,000	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Leah Fairman.
Roseburg	Douglas	510	33	53.8	− 2.2	87	30	34	11	42	1.75	− 0.30	0.66	0	16	7	12	12	nw.	U. S. Weather Bureau.
Salem	Marion	120	21	53.3	− 2.5	85	30	40	11†	32	2.78	+ 0.25	0.47	0	15	6	1	24	sw.	M. P. Baldwin.
Silver Lake	Lake	4,700	14	46.6	− 2.2	78	21†	22	6	49	0.82	− 0.41	0.20	0	9	6	20	5	w.	L. W. Charles.
Siskiyou	Douglas	4,115	3	46.4	.....	74	29†	27	6	37	2.26	.....	0.61	5.0	11	2	16	13	n.	U. S. Weather Bureau.
Sparta	Baker	4,150	20	48.0	− 2.8	80	31	27	10	42	1.25	+ 0.65	0.37	0.5	11	8	14	9	w.	J. A. Wright.
Stafford	Clackamas	400	15	53.0	− 1.6	84	30	34	20	37	5.41	+ 2.51	1.03	0	20	.....	.....	.....	sw.	John P. Gage.
The Dalles	Wasco	112	37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. L. Brooks.
Toledo	Lincoln	75	21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. B. Crosno.
Umatilla	Umatilla	340	23	59.0	− 1.9	94	31	38	7†	43	1.53	+ 0.83	0.54	0	8	17	2	12	w.	Mrs. Helen T. Duncan.
Vale	Malheur	2,242	19	55.2	− 0.6	89	31	28	10	45	1.15	+ 0.02	0.32	0	7	17	9	5	nw.	H. P. Osborne.
Van	Harney	3,506	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. Howe.
Wallace Orchard	Polk	170	2	52.6	.....	84	30	34	11	40	3.68	.....	0.71	0	17	4	14	13	.....	Chas. A. Park.
Wallowa	Wallowa	2,935	8	47.7	.....	85	31	25	7	49	3.17	.....	0.73	0	16	2	7	22	nw.	L. J. Coverstone.
Wamic	Wasco	1,500	10	49.2[b]	.....	87	30	19	29	60[b]	0.24	.....	0.16	0	2	.....	.....	.....	w.	A. J. Swift.
Warmspring	Crook	1,500	9	52.7	.....	89	31	27	13†	48	0.41	.....	0.18	0	4	17	7	7	nw.	Claude C. Covey.
Wasco	Sherman	1,263	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. R. Howell.
Westfall	Malheur	3,000	.....	51.8	.....	81	7	32	3†	44	0.59	.....	0.25	0	5	17	0	14	w.	H. M. Gilliam.
Weston	Umatilla	1,800	19	51.0	− 3.9	85	31	32	6†	48	5.05	+ 2.67	1.99	0	14	5	10	16	sw.	M. A. Baker.
Williams	Josephine	1,368	19	52.0	− 3.7	86	20	27	6†	54[a]	1.05	− 0.55	0.60	0	6	11[a]	9[a]	10[a]	s.	Francis J. Leroy.
Yonna	Klamath	4,146	4	.....	.....	79	21	.....	.....	.....	0.67	.....	0.18	0	6	4	22	5	w.	Jacob Ruecke.

[a], [b], [c], etc., indicate respectively, 1, 2, 3, etc., days missing from the record.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for May, 1911. District No 12, Columbia Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Montana.																																	
Anaconda	Missoula		T.			.01				.12	T.		T.	.05	.11	.60	.04	.15	.04	.02			T.	.14	T.	*	.63	*	.04	T.			1.95
Bison Mountain	do		.20		.10			.05							T.	.55	.05		.12					.90	.12	.05	.20					2.34
Butte	do		.10						1.00	T.	T.			T.	.50	.20	.15	T.	.05	T.				.04	.04	.02	T.	.10	T.			T.	2.20
Columbia Falls	Flathead			T.			.45			.12				.58	.02	.31	.17		.13		.07	.05	.10			.26			.02				2.28
Como	Bitter Root						25						.10	.25		.11	.06	.26							.02		.06		.02				1.13
East Anaconda ‖	Missoula	T.	.01	T.					T.	.01	T.			.01	.10	.42	T.	.20	.05	T.	T.		.02	.18	.18	.35	.10	.06	T.			.19	1.88
Fortine	Flathead		T.	T.	.06	.05	.33		.22	.04	.02	T.	.16	.56	T.	.01	.14		.05	T.		T.	.36		.07	.54	.06	.02	.08				2.77
Hamilton	Bitter Root													.22	.14	.05	.06		.22	.07												0.76
Hat Creek	Missoula			.16			.08		.11				T.			.45	.16	.34	.26	.07				.26	.06	.11	.40	.06	.04				2.56
Kalispell	Flathead		T.	T.		.06	.13			T.			T.	.34	.05	.16	.05	.03	.01	.02			.09		.02	T.						0.96
Lost Creek	Missoula										12			.08		40		.20	.15					.10		.20	.32					1.57
McGinnis Meadows	Kootenai		.04	.02			.30		.11					.15	T.	.20	.53	.06	.06					.11	.33	.16	T.	.41					
Missoula	Missoula			.01			.01		T.					.37	.06	.23	.02	.02	.03	.05					.14	T.	.03	.01	.02				1.00
Ophir	do	.15				T.			.16						T.	.64	.43	T.	T.			T.	T.	.05	.10	.03	.10		T.	.06			1.72
Ovando	do			T.					T.						.35	.15	.05	.12	.02	.05			T.			.02	T.	.02	T.				0.78
Philipsburg	do						.25								.43	.11	.04	.45	.04				.16	.02	T.	.33	.08	.03	.02	.05			2.01
Plains	Columbia			T.					T.					T.		.15		.10						.12			.36					0.73
Pleasant Valley	Kootenai			.07		.06	.19		.21	.08			T.	.18	.05	.07	.37	.09	T.				.03	T.	.47	.23	.13	.04					2.27
Polson	Flathead						.37				.05			.46		.15	.14	.07	.03						.01	.02		.09	.22				1.61
Proctor	do																																
St. Ignatius	do	T.	T.	.12	.01		.39		T.	T.	.14	T.		.75	.06	.31	.11	.08	.11	.12	T.	T.		T.	.28	.03	T.	.22	T.				2.73
St. Regis	Missoula			.08			.24									.14	.30	.17	.09	.05					.19	.18	.03	.32	.04	.02			1.85
Saltese	do		.22	.13		.44			.25							.58	.13	.36	.53					.72	.12	.30		.22					4.00
Snowshoe	Kootenai		.21	.33	.47	.06	.49	.04	.12	.10	.30		.42	.05		.11	1.11	.53	.74	.27		.09	.30	.11	.77	.10	.01	.14	.08				6.95
Troy	do																																
Willow Glen Stock Farm.	Missoula		T.						T.	T.				.25		.53	.23		.10	T.			T.	.20	T.	.27		.20				.25	2.03
Wyoming.																																	
Afton	Snake			.12						.25						.02	.43	.43	.05							.16	.52			.07			2.05
Alta	do	.05	.23	.05						.40	.03					.07	.21	.22	.32	.21				.23			1.75	.18					3.95
Bedford	do	.07	.10	.08						.16	T.								.69	.14							.82	.30					2.36
Belcher River	do																	.60									.50						1.10
Moran	do																								.02		.70						0.72
Snake River	do	T.	.30	.20						.40	T.				T.	.20	.10	.20	.70	.20	T.			T.	T.		.90	T.					3.20
Nevada.																																	
San Jacinto	Snake	T.														.86	.03	T.	.11	T.				T.		.02	T.			.57			1.59
Utah.																																	
Standrod	Raft †		.12							.05						.44		.06	.15	.03							.06	.05					0.96
Idaho.																																	
Almo	Snake	T.	.05							.04				.14	.03	.58	.05	.04	.06				.03	.01			.12	.01	.01	.05		T.	1.02
Alpha	Payette	.04		.25	.02	T.			.04						.25	.39	.37	.34	.77	.13			.03										2.55
American Falls	Snake		.17												.35	.33	.34	.13	.34					.13	.03			.21					1.93
Blackfoot ‖	do	.15		T.			T.			T.					.35	.18	.15	.27	T.	T.			.11	.03	T.	T.	.68	T.				T.	1.92
Blackfoot Dam	do		.20	.10						.30	.10				.08	.25	.30	.09	.55	.03				.05			.55	.56					3.16
Bogus Creek	Payette	.07	T.	T.		.62	.43	T.		T.			T.	.14	T.	1.14	.64	.70	.29	.05				.07							T.	4.15
Boise	Boise	T.	T.	.04		.47	.01	T.					T.	.01		1.65	.09	.19	.05	T.			.01	.05			T.				T.	T.	2.57
Bonners Ferry	Kootenai		.30	.04		.10	.36		.29	.02	T.		.15			T.	.67	.12	.03			T.			.18	.03		.08					2.37
Boulder Mine	Boise	.07	.03	.12	.02	.09	.56		.19					.08		1.09	.57	.86	.54	.09							.09					.03	4.43
Buhl	Snake															1.15	T.	.28	.33	.04			T.	.14		.03							1.97
Caldwell	Boise			T.		.33	.11		T.				.05	.06		.45	.13	T.	T.				T.	T.			.11	.27					1.13
Camas	Lost R. Reg.															.10	.06	.03	.01		.03		.05	.01	.06		.03	.01	.02		T.		
Cambridge	Snake		T.	.15		.28	.13									.17	.46	.25	.43	T.				T.									1.87
Cedar Creek Dam	do	.11															.61		.22	.14			.27								.19		1.54
Chesterfield	do		.09	T.	T.	T.	T.	T.	T.	.04						.26	.03	T.	.29	T.							.11	.27					1.09
Clyde	Lost R. Reg.								T.	T.					.07	.78	.05	T.	.10	.01			T.	.07	.31	.09	T.	.03	.04				
Cottonwood Creek	Boise																																
Council	Snake																																
Culdesac	Clearwater		1.10		.25				.51	.15			.31	.05		1.01	.67	.32		.26				.15	.41	.17	.23	.04					5.63
Dent	do		.48	.32		.36	.34	.09	.11	.01			.26	.25	.10	.05		.25	.50	.12				.02	.28	.40	.05	.12					
Driggs	Snake						.03									.52	.35	.12		.52				.20			1.25	.27					3.32
Edie	Lost R. Reg.		T.	.27					T.	T.						.58		T.	.18				T.	.50	.16	.61		.16				2.52
Emmett	Payette	T.				.41	.45	T.						.05		.77	.24	.05	.17	.03								.30					2.47
Forney	Salmon																.07			.09								.02					0.18
Garden Valley	Payette	T.	T.	.15		T.	.54						.14		.11	.08	.51	.32	.30	.40	.03				T.			T.					2.58
Garnet	Snake						.40										.77			.20													1.37
Glenns Ferry	do						.25									1.03	.30		.23	.05													1.86
Gooding	Wood-Malad		.02						.03							1.04	.31	.05	.27	.02			T.	.03			T						1.77
Grand Forks	St. Joe		.23	.15	.70	.50	.20		.21	.15	.08		.08	.19		.06	.23	.25	.75	.30				.05	.35	.20	.10	.20	.30				5.18
Grandview	Snake	T.		.01		.19	.05									.50	.08		.07														0.90
Grimes Pass ‖	Boise	.20	.16	T.		.68	.03	.15						T.	.05	.11	1.24	.45	.65	.20	T.				.05			.08				.03	4.08
Guffey	Snake		T.	.03		.12	T.		T.	T.				T.		T.	.79	.06	T.	.12	T.				T.	T.					T.	1.12
Hailey	Wood-Malad		.02	.03					T.							1.42	.39	.29	.36					.14	.01		.05	.16	.04				2.91
Hotspring	Snake	T.				T.	.33									.70	.12		.33				T.	.08			T.						1.56
Idaho Falls	do	.05	.14	.02						.02	.01				T.	.17	.27	.17	.28	.04			.02	.10	.16		.48	.33	.03				2.29
Indian Valley ‖	do			.08	.08		.69	T.						.09	.06	.07	.53	.05	.30	.07													2.02
Irwin	do		.29	.02						.22					.02	.11	.08	.13		.13		.03	.11	.04		1.14			.14				2.46
Kellogg ‖	Coeur d'Alene		.20	.47	.32		.56	.03	.15	.07	.10			.37		.11	.36	.13	.63	.43			.11		.38	.22	.03	.45	.17				5.29
Kirkham	Payette	.31		.29		.80										.78		.40	.41	.48	.10												3.57
Kooskia	Clearwater			.50			.78			.25				.34	.28		1.00	.25	.40	.20					.40	.20	.16	.24					5.00
Lakeview	Pend Oreille		.31	.28	.08	.06	.28			.10			.12	.24			.43	.28	.42	.05				.16		.28	.16	T	.15				3.40
Landore	Snake		.33	.51	.09	.30	.65		T.	T.	.02		T.	T.	.09	.07	.90	.79	.89	.20					.10	.50	.02	.01	.01				5.48
Lewiston	Clearwater	T.	.25	.22		.34			.28	T.			.04	.03	T.	.04	.18	.03	.12							.15	T.		.18				1.86
Little Camas	Boise																																
Long Gulch	do	.04	.18				.35		.20	.05					T.	1.24	.40	.12	.58						13		.04						3.33
Loon Creek	Salmon		.13	.11			.02		.09	.07						.14	1.06	.15	.21	.52	.07			.01	.06	.01		.28	.02				2.95
Mackay ‖	Lost R. Reg.															.28	.35								T.	.08		T.					0.71
Meridian	Boise	T.	T.	.04		.23	.31		T.					T.	T.	.79	.35	.04	.04	.05			T.	.04								T.	1.89
Mesa ‖	Snake			.18		T.		.58								T.		.06															
Middle Fork	Clearwater		.53	.20		.30	.75		.06	.05	.03		.10	.30	.40	.26	.70	.05	.55	.30				.16	.28	T.	.10	.34					5.46
Milner	Snake	.09						.10							.20	1.45	.28	.05	.33	.21				.24				.15					3.10
Moscow	Palouse		.25	.16		.10	.12		.14				.11	T.		.03	.30	.07	.22						.12	.03	.44	.08					2.17
Mountainhome	Snake					T.	.40									.78	.23	.06	.19	.06				.01									1.73
Murtaugh ‖	do	T.	T.				.06									.50	.66	.21	.12	.15				.13	.03								1.86

TABLE 2.—*Daily precipitation for May, 1911. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Idaho—Continued.																																	
Nez Perce	Clearwater		.12	.28		.42			.15	.09			.20	.60	.02	.48	.22	.24	.23	.10				.09	.23	.33			.08				3.88
Oakley	Snake															1.15	.15	.05	.20					.10				.10					1.75
O'Hara Bar	Clearwater																																
Orofino	do		.63	.68		.70	.16	.02	.17				.25	.19	.09	.03	1.61	.17	.43	.07				.09	.32	.42	.09	.07	.01				6.20
Payette	Payette		T.	.03	T.	.19	.22		.01				.04	.01		.45	.30	.08	.08							T.							1.41
Peaceful Valley	Snake																																
Pebble	do		.23	.04						.14	T.				T.	.49	.40	T.	.63	.11	T.					.10	.19						2.33
Pierson	Salmon														.29				.44	.42													
Pleasant Valley	Boise			.03		.22			.01					.03		1.08	.23	.05	.05	.04			.01	.03									1.78
Pocatello	Snake		.14	.01		T.			.01	.09	T.				.01	.46	.21	.15	.30	.07			T.	.07	T.	T.	.05	.05					1.62
Pocatello Nursery	do		.17	.09						.20						.51	.18	.13	.30	.42							.04	.07					2.11
Porthill	Kootenai		T.	.22	.12	.02	.27		.13	.07			.09	.03		.15	.30	.20	.13						.20								1.93
Pyle Creek	Payette		.05	.10		.05	.41		.02					.12	.04	.38	.48	.25	.57	.02				.03				.03					2.55
Richfield	Wood-Malad		.10	T.			.06		T.						T.	.70	.45	.05	.20					.08	.07		.01	.40					2.12
Roseberry	Payette			.18		.15	.03							.22		.28	.06	.20	.15	.05				.13	T.	T.						.10	1.42
Roseworth	Snake	T.					.04									.55	.22	.11	.21					.15	T.								1.28
Rupert	do		.04				.01									.30	.45	.03	.02					.13	T.	T.							0.98
St. Maries	St. Joe		.43	.11	.06	.11	.28		.08	.02			.12	T.	.10	T.	1.16	.11	.54	.01					.25	.52		.30	.05				4.25
Salmon	Salmon														.01	.03	.01		.13	.06			T.	.06				T.	T.				0.30
Salmon River Dam	Snake	.02	.05													.80	.05	.07	.17	.21				.13	T.	T.	T.	T.				T.	1.50
Sandpoint	Pend Oreille	.08	.57	.20	.20	.08	.27		.09	.02	.17		.42	.03			.70	.36	.59				.28		.06	.01			.23				4.36
Shoshone	Wood-Malad	T.	.10			T.	.05									1.00	.33	.02	.21				.01			.01		.25					1.98
Silver City	Owyhee	T.		.22		.36	.11	T.	T.	T.	T.			.18	T.	2.05	.23	.20	.40	.01				.04			.16						3.96
Smith Ranger Sta.	Kootenai																																
Soldier Creek	Wood-Malad		T.	T.												.86	.25	.15	.56	.03				.08			.04	.03					
Spirit Lake	Pend Oreille		.45	.29	.19	.01			.36		.05		.44	.04		.03	.45	.16	.77			.06			.25	T.	.01	.08	.15				3.79
Springfield	Snake		.11						T.							.45	.26	.13	.20	.40			T.	.18	.01		.14	.15				2.03
Sugar [1]	do																.26	.20	.28	T.				.08	.05		.43	.14				1.44
Sunnyside	do	T.		T.		.05	.40		T.							1.05	.12	.01								T.					T.	1.63
Tripod Mountain	Payette			.19		.32	.33			T.					.34	.56	.75	.19	.19	.04			T.										2.91
Twin Falls	Snake	T.					.06									.94	.14	.11	.25	.03			.01	.19			.01						1.74
Vernon	do		.50	.05												.15	T.	.35	.45	.05			T.	.10	.15		.82						2.62
Wallace	C. d'Alene		.23	.10	.08	.08	.68		.06	.14	.06		.03	.20	.15	.03	.76	.19	.79	.26			.06		.19	.19	.30	.14	.12				4.84
Wendell	Wood-Malad						.05		.07							1.08	.31	.04	.27	.03			T.	.08	.05		T.					.02	2.00
Washington.																																	
Aberdeen	Coast	.13	.61	1.44	1.73	.27	.31	.25	.19	.20			.62	.06			.15	1.12	.79	.02					.23								8.12
Anacortes	Puget Sound			.05	.07	.72	.05	.02	.48	.43		.03	.46	.04				.45		.27						.01							3.08
Baker	do	.11	.42	.90	.21	.11			.81	.21	.09	T.	.16	.23			.16	.04	.47	.11						T.							4.03
Bellingham	do	T.	.03	.08	.20	.70	.09	.03	.68	.19	.01		.35	T.			T.	.11	.01					.02		.10							2.60
Bellingham, near	do		T.	.07	.22	.83	.04	.07	.72	.21	.03	T.	.31	.02			T.	.06	.01	.04		T.				.03	.01	T.						2.67
Beverly	Columbia																																
Blaine	Puget Sound		.02	.10	.31	.70	.10	.04	1.14	.24			.35	.02				.01	.02			T.											3.05
Blewett	Wenatchee								.45		.25	.30					.20	.08					.10	.25	.15	.40	.10						2.28
Bremerton	Puget Sound		.16	.10	.84	.24	.06		.01	.02	.03		.12	.36				.24	.48	.01					.11								2.78
Brewster	Columbia			T.	.13				.65	T.			.52	.05		.20		.27	.03						.03	T.	.02	T.					1.90
Bumping Lake	Yakima																																
Cedar River	Puget Sound			.41	.38	.61	.09		.30	.96	.06		.46	1.11				.45	1.23	.33					.04	.09							6.52
Centralia	Coast	.09	.07	.32	.73	.56	T.	.05	.14	.13		T.	.77				T.	.72	.50	T.				T.	.39	.05							4.52
Cheney	Spokane		.11	.16	.14	T.	.02		.05	.02				.18	T.	.08	.36	.04	.13	.07				.24		.06							1.66
Clealum	Yakima				.02				.78	.02			.18	.02					.63	.04				.02	.27	.83	.02						2.83
Clearbrook	Puget Sound		.03	.23	.52	.71	.28	.06	.86	.46	.03	.16	.13	.07					.09							.12							3.75
Clearwater	Coast												.38	.21	T.		.13	1.25	.93	.02				.05		.01							
Colfax	Palouse	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	1.22						.28	.12		.10					1.72
Colville	Columbia		.05	.12	.05		.04		.06	.05	.04		.28	.13		.22	.35	.21	.59				.14		.10	.02							2.45
Conconully	Okanogan		.02	T.	.36		.06	T.	1.10	.04			.21	.33	.27	T.	.68	.36	.36					.02		.03	.23	.11	.16				4.34
Cowiche	Yakima		.01		.02				.49				.16					.06	.06						1.07	.25							2.12
Crescent	Spokane																																
Davenport	Columbia		.04	.11	.03		T.		.07				.21		.05		.20	.09	.08						.15	.03		.27					1.33
Dayton	do		.23	.06		T.			.20				.33			.10	.60	.02	.77					T.	T.	T.	.20	.02					2.53
Detroit	Puget Sound	.20	.20	.91	1.06	.33	.14	.02	.16	.10			.20	.01				.36	.47					T.	.14	.05							4.35
Dixie	Columbia	T.	.78	.15		.10	T.		.63	.26			.61	.01	T.	.30	2.15	.24	1.60	T.					.21	.14	.50	T.					7.68
Dryden	Wenatchee	T.	T.	.01	.06				.54				.20	.05			T.	.07	.03				T.	T.	.15	.22	T.	T.					1.33
Duckabush	Puget Sound		.93	1.20	2.50	.38	.10	.09	.23	.10			.50	.05																			
East Sound	do																																
Ellensburg	Yakima			.15	T.				.45	T.			.19	.05				.04						T.	.46	.20							1.54
Ephrata	Columbia																																‡1.90
Forks	Coast																																
Fort Simcoe	Yakima			.10	.15			1.75										.20						1.80	.20	.05							4.25
Goat Lake	Puget Sound		.06	.46	1.15	.31	.46	.07		1.20	.05	.02	.08	.45	.19		.26	.10	1.11	.24			.14			.19	.18						6.72
Gold Basin	do		.30	.80	1.56	.40	.64	T.	1.26	.50	T.	T.	.30	.66			.40	.30	1.32	.50			.03	.21		.50	T.	T.					9.68
Goldendale	Columbia	.02	.10		.09				.51	.04			.20					.30	.10						1.03	.11	.25	.28					3.03
Granite Falls	Puget Sound		.34	.37	.57	.90	.14		1.44	.40	.20		.31	.30				.42	.76					.55	.10	.04							6.84
Hatton	Columbia		.07			T.		.04		T.			.14			.25	.29	.23	T.			T.		.03	.13	.01							1.19
Huntsville	do			.35				.02			.25				.37		.14	.50								.20							1.83
Irene Mountain	do		.03	.05	.07	.01	.13	.33	.01	T.			.45	.25	.04	.07	.98	.37	.30				T.		T.	.15	.22	.01					3.52
Kennewick	do	T.	.03	.04	T.			.02		T.			.24			.20		.09							.02	.04							0.65
Kettle Falls	do		.03	.13	.10	.04			.15		.02		.13	.05		.23	.62	.32	.60				.01		.12		.08						2.70
Kiona	Yakima								.10				.12			.02	.08								T.	.16							0.48
Kosmos	Columbia		.18	.35	.19	.43	.03		.20	.37	.12		.65	.24	.02	.03	.05	.14	.86	.20					.72	.17							5.00
La Center	do	.12	.18	.55	.48	.21		T.	.65	T.		.53	.29				.17	.80	.24					1.31	.14	T.							5.67
La Crosse	Palouse		.07	.07	T.	.08	T.		.10	.02			.35		T.	.04	.93	.06	.77						.22	.06	.42	.06					3.25
Lake Clealum	Yakima			T.	.05	T.			.73	.02			.17	.04	T.			.01	.45	.53	T.				.17	.78	.02	T.					2.97
Lake Kachess	do		T.		.05	.04			.95				.20	.07			T.	.09	1.04	.49		T.	T.	T.	.30	.35		T.					3.65
Lake Keechelus	do																																
Lakeside	Columbia		T.	.05	.06				.64			.03	T.		T.	T.	.23	T.	.06						.05	.09		T.					1.21
Laurel	do		.20	.23		.32			.53				.11	.03				.89	.91						1.09								4.31
Laurier	Kettle		.11	.01	.10	.04	.23	T.	.32	T.	.02		.13			.26	.48	.62	.66			.02			.03	.23	.01						3.27
Lester	Puget Sound		.15	.15		.15			.85	.15			.20	.30					1.15	.50					.30								3.90
Lone Tree	Coast	.21	.42	.68	1.73	.28	.13	.13	.28	.02		T.	.50	.03	T.	.04	.22	1.39	.21	.04			T.	.02	.16								6.49
Longmires Springs	Puget Sound																																
Lost Creek	Columbia		.05		.28	.07			.35	.04			.27	.04		.45	.64	.31	.63						.15	T.	.09	T.					3.37
Lucerne	do																																
McConihe	do	T.	T.	.04	.03				.05				.17	T.		.03	.57	.03							.20	.02	.04						1.18
McCumber's ranch	do		.10	.20	.20				.40					.10				1.00	.40						1.10								3.50
Mottinger	do			.03					.12	.08			.29	.08		T.	.16	.02	.17							.25	.12						1.35
Mount Pleasant	Coast			.29	.79	.65			.28	.26			.50		.03		.13	.06	.13					.13									3.25
Moxee	Yakima		.04	T.	.01				.22	.01			.14	.02			T.	.05				T.			.29	.18	.03						0.99
Newport	Pend Oreille		.38	.24	.21	T.	.10		.22	.02	.02		.37	.12		.04	.28	.21	.29	T.		.10			.05	.08	T.	T.	.15				2.88
North Head	Coast	.33	.17	.66	1.02	.32	.06	.27	.19	.11		.09	.34	.01			.21	.00	.15					.20	.01								5.14
Northport	Columbia	.07	.01	.30	.01	.12	.01	.08	T.	.05	T.	.06	.33	.03		.33	.43	.22	.19						.08	.03	.06	T.					2.41

TABLE 2.—*Daily precipitation for May, 1911. District No. 12*—Continued.

Stations	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Washington—Contd.																																	
North Yakima	Yakima	T.	.05	T.	.01	T.			.28	T.			.08	.06		T.	T.	T.	.06						.34	.20	.02						1.10
Nutland	Columbia						.20						.27	.03				.09	.02						.10		.01						0.72
Odessa	do	T.	T.	T.	T.	T.	T.						.07	.04	T.	.09	.34	.04	T.					T.	.73	T.	.04	T.	T.				1.35
Olga	Puget Sound	.05			.10	.94	.10	.16	.45	.54			.44				.16		.04	.12	T.					T.							3.10
Olympia	do	.04	.18	.53	1.04	.57	.10	T.	.11	.12			.41					.31	.53						.15								4.09
Omak	Okanogan																																
Oroville	do			T.	.19	.17			.46				.29	.35		.03	.45	.12	.26					T.	T.	T.		.03	T.				2.35
Peola	Snake		.16	.17		.07	.01		.37	.15	.03		.17	.06	.02	.15	.02	.03	.51			T.		T.	.42	.34	.08						2.75
Pomeroy	do		.10	.05		.05	.04			.06			.33		.05	.02	.27	.03	.47					T.	.17	.29	.27	T.					2.20
Port Crescent	Coast	.01	.08	.43	.68	.04	.08	.11	.16	.18		.20	.33				.04	.21	.14				.04	.18		T.							2.89
Port Townsend	Puget Sound	T.		.19	.31	.57			.80	.36	.15	T.	.18	.07			.06	.24															2.93
Pullman	Palouse		.19	.13	.04	.12	.04		.15				.10				.82	.08	.32	.06					.06	.05		.23					2.39
Quinialt	Coast																																
Republic	Kettle		.08	.14	.11	.13			.25	.04	.07		.16	.14		.22	.73	.62	.75		T.				.24	.02	.02	.03					3.75
Rex Creek	Columbia			.04	.33					.07			.08		.02	.12									T.	.40							1.06
Ritzville	do		.06	.05	.06	.02			.18	.02			.22	.05		.11	.46	.09							.58	.13	.01						2.04
Rock Lake	Palouse		.05	.07		.15	.20		T.	.02			.30	.18		.08	.48	.04	.13			T.		T.	.21	.08	T.						1.99
Rosalia	do		.34	.16	.10	.09	T.		.04	.17			.17	.07		.10	.42	.05	.41						.28	.20	.02	.02					2.64
Russell's ranch	Yakima	T.	.04	.06	.05				.53	T.			.04	.03				.39	.54	.02					1.80	.02							3.52
Seattle	Puget Sound	.04	.08	.48	.18	.17	.02	.12	.06	.08	.09	.01	.44	.19		.04	T.	.15	.22	T.			T.	.09		.02							2.48
Sedro Woolley	do		.08	.06	.26	1.67	.01	.06	.90	.68	.05		.33	.28	.01		.04	.05	.13	.84				.06		.05							5.56
Sixprong	Columbia		T.	T.					.03				.11	.31			.17	.14	.10							.13	.03						1.02
Skagit Power Dam	Puget Sound																																
Snohomish	do		.03	.12	.52	.28	.18		.32		.28	.10	.40	.40			.05	.18	.09	.03			.14	.02		T.							3.14
Snoqualmie Falls	do		.11	.57	.42	.39	.08		.53	.10			.29	1.45			.10	.50	.77	.60			.09	.44		.34							6.78
Snyder's ranch	Columbia			T.	.27				.50				.30	.37	.03	.18	.08	.03	T.						T.	.33	T.						2.09
South Bend	Coast	.09	.65	.55	1.75	.49	.31	.09	.39	.18			.77	.22		.01	.16	.81	.89			.01			.46								7.83
Spokane	Spokane		.08	.19	.02	.03	T.		T.	.05			.19	T.		.12	.20	.05	.05			T.			.24	T.	T.	.11	T.				1.33
State University	Puget Sound		.10	.09	.48	.03		T.	.24	.21	.12		.19	.37	T.		.05	.19	.15	.03			T.	T.	.08	.02							2.35
Stoke's ranch	Columbia		.06	T.	.03					.77			.53	.67			.32	.01	T.							.28	.02		.03				2.72
Sumner	Puget Sound	.06	.08	.26	.50	.44	.04	.02	.26	.12	T.		.31	.13	T.		.18	.32	.55	T.				.10	.03	.20	T.						3.60
Sunnyside	Yakima		.07	.01		T.			.22	.01			.18	.02			.04		.02						.11	.24	.09	T.					1.01
Tacoma	Puget Sound	.06	.15	.71	.52	.40	.02	.08	.15	.16	.02	.02	.18	.03			.02	.17	.31			T.	T.	.10		.08							3.18
Tatoosh Island	Coast	.03	.35	.38	1.18	.06	.07	.58	.25	T.	T.	.10	.21	T.		T.	.05	.78	.21		T.			T.		T.	T.						4.25
Tieton	Yakima		T.	.07	.07				.83				.10	.01		T.	T.	.36	.27						1.78	.08	.03						3.00
Tonasket	Okanogan			.10		.12			.59	.03			.25	.32	.10	.01	.51	.10	.25						T.	.05							2.43
Touchet	Columbia		.02	.05		T.		T.	.14	.04			.33	.01	.01	.27	.48	.04	.11						T.	.04	.12	.09					1.75
Touchet Ridge	do			.15		.60	.20		.80	.20			.80	.15		.80	1.40		2.10					20			1.20						8.60
Trinidad	do				.03	T.			.18				.12					.07	.13						.16	.15							0.84
Vancouver	do	.11	.06	.30	.22	.40	.04	T.	.09	.19			.42	.03				.53	.28						1.31	.10							4.08
Vashon Island	Puget Sound		.20	.30	.73	.52	.05	T.	.15	.14	.06	T.	.26	.36	T.		.01	.35	.43	.03	T.	.02	T.	.14	T.	.04	T.						3.79
Wahluke	Columbia								.08				.16				.17	.05	T.							.05							0.51
Wallace	Okanogan		.04	.03	.23	.04	T.		1.02				.54	.51	.23	.22	.41	.47	.49						.04	.27	.02	.04	T.				4.60
Walla Walla	Columbia	.12	.12	.05		.02		.16	.22	.12			.32	T.		.50	.47	.15	.16					T.	.08	.98	.17						3.64
Washougal	do	.08	.40	.64	.15	.40	.15		.35	.32			.65	.20	T.		.05	.54	1.10	.10					1.25	.12	.02						6.52
Waterville	do		T.	T.	.05				.84			T.	.12	T.		T.	.44	.06	.04					T.	.17	.12	T.	T.					1.84
Wenatchee	do		T.	.03	.06				.33	T.		T.	.10	T.			T.	.01	.06					.01	.30	.47	.02	.03					1.42
White Salmon	do	T.	.11	.07	.12	.02	.08		.46	.02	.03		.03					.37	.72	.05					.72	.01							2.81
Wilbur	do				.04		T.		.10				.30				.65	.14	.08		.01				.40	T.	.10	.16	.08				2.06
Wind River	do	.05	.71	.92	.48	.06	.35		.53	.16	T.		.58	.03			.06	1.84	2.85	.09					.92	.24	T.						9.87
Winthrop	do		.01						.90				.03	1.00			.85									.01	.04	.10	.01				3.55
Yale	do		.45	.28	.48	.16	.10	.20	.50	.08	.87	.11	2.25	.03			.01	2.25	1.44	.03				.80	.90	.34							11.28
Zillah	Yakima	.01	.05	.02					.15				.11	T.		T.	.04	T.							.26	.06							0.70
Zindel	Snake		.22	T.			.55			T.			.23	.28		.08	.06	.07						.48						.22		2.19
Oregon.																																	
Adel	SE. drainage																																
Albany	Willamette		.32	.08	.08	.48	.10		.02	.16	.08		.16	.12	.01		.06	.12	.62	.04				.10		.28	.02						2.85
Allingham	Deschutes	.03	.03	.03			.01	.07	.10				.03				.11	.20	.55	T.						T.							1.16
Ana River	SE. drainage		T.	.10					.10	.01			.03				.01	T.	.27						T.								0.52
Ashland	Rogue	T.	.04		T.	.48			.03				.05	.20	T.	T.	.65	T.	.22						T.							.04	1.71
Astoria	Columbia	.12	.24	.96	1.47	.18	.13	.12	.08	.28	.01		.64	.06	.03	.01	.01	1.53	.83	.02				.01	.12	.03							6.88
Bagley's ranch	Snake	T.	.10	.15		.30							.07			.45	.26	.07	.16														1.56
Baker	do	.01	.05	.07	.01	.26			.08	T.			T.	T.		.39	.36	.01	.17					.04	.01	T.	T.	.01					1.47
Bay City	Coast	.52	.48	.97	1.29	.75		.67		.35			.66					.97	.70						.42	.38	T.					T.	8.16
Bear Creek	Deschutes																																
Bear Valley	Int. drainage														.50	.24	.25	.10	T.												T.	1.09
Beech Creek	John Day	T.	.10	.04		T.	.10		.27	.03			.40		.23		.40		.22						.18	T.	.28					T.	2.25
Bellfountain	Willamette	.25	.11	.26	.10	.41	.14	.10	.33	.10	.20	.19			.06	.95	.91	.01							.08	.27	.12						4.59
Blend	Deschutes																																
Big Basin	John Day	.01	.01	.01				.01	T.	T.			.01			.02	T.	T.										.01					0.08
Black Butte	Willamette	T.	.35	.20		.40		.10	.40	.30			.65	.20			.15	.75	.95	.10		.05	.20	.10	.65								5.55
Balock	Columbia																																
Bue Mountain Sawmill	Umatilla		.20	.25		.25			.35	.45			.45	.07		.90	1.90	.15	1.00	.10					.25	.20	.66	.05					7.23
Brogan	Malheur					T.								T.			.25	T.	.14													0.39
Buena Vista	Snake		T.		.02	.02				.01			.02			.02	.03	.01	.03	T.								T.					0.16
Burns	SE. drainage	.02	.01	.03			.05				.10	.20						.02	.61	T.		.14				22						.12	0.75
Burns's mill	do		.03		.11			.05		.11			.06	.12			.02	.02	.61	T.						40			T.	.03			1.70
Butte Falls	Rogue	.02	.03	.03		.67		.01	.15	.20			.08	.02	.08		.52	.09	.43	.01					.03	.03						.10	2.50
California Gulch	Umatilla			.15				.65					.54	.04		.40	.15	.18	.06						.17	.60	.42						3.36
Canyon City	John Day	T.	.10	T.		.06			.17	.15			.41	.04	.01	T.	.20	.35	.18					T.	T.	T.	.07					.01	1.75
Cascade Locks	Columbia	.05	.90	.58	.20	.15	.25	.03	.50	.31	T.		.55	.04			T.	1.13	1.06	.08					.99	.13	T.						6.95
Cascadia	Willamette	.14	.57	.08	.03	.57			.44	.28			.85	.19			.33	.62	1.00						.13	.22							5.45
Cazadero	do	.04	.56	.26	.18	.43	.32	.07	.22			.56	.10	.03		.03	.22	.97	.50						.54	.14	.10						5.27
Christmas Lake	SE. drainage	.02	.01	.12		T.	T.		.08				.05	T.	.01		.08		.02								.02	T.				T.	0.41
Cliff	do	.04		.23		T.			.06	T.			.10	.02			.06		.13														0.64
Columbia mine	Snake		T.	.37		.19		.10	.15				.23	T.		.21	.30	.40	.40						.20	T.		T.					2.55
Condon	John Day																																
Coquille River L. H	Coast		.15	.45	.55	.50		.61	.81	.21			.05	.41	.04	T.	.19	.65	.41	.14				.05	.15	.30	.05				.04	.03	5.79
Cornucopia	Snake	.03	.12	.32	.03	.17	.09		T.				.11	.40	T.	.22	.50	.87	.58	.11				.11		.01		.09					3.76
Corvallis	Willamette	.23	.05	.28	.49	.13	T.	.35	.21				.25			.07	.25	.77	T.			.25	.60	.25	.03								4.21
Cracker Creek	Snake	.03	.02	T.			.05					.02	.01			.02	.04	.06	.06	.02		T.	T.	T.	T.	.01							0.34
Crescent	Deschutes	.02	.03	T.	T.	.02		.07	.09	T.			.07	T.			.10	.11	.12						T.	.02						.03	0.68
Dayville	John Day	T.	.01	.10		T.			.08	T.			.22	T.			.09	.33	.11					T.		.05							0.99
Deadwood	Coast	.45	.21	.54	.05	.74	.46	.32	1.09	.07		.02	.44	.08				1.65	2.02					.01	.35	.05	.05						8.55
Diamond	SE. drainage					T.	T.		.08	T.			T.				.12	T.	.15	T.							.20					T.	0.55
Doraville	Columbia	.08	.04	.35	.17	.71	.05	.04	.09	.20	.01		.55	.02			T.	.58	.56	.03				.02	1.21	.08							4.79
Drain	Umpqua	.14	.11	T.	.02	.72	.02	T.	.19	.12	T.		.16	.30			.15	.35	.87	T.					.05	.02	.04						3.26
Dufur	Columbia	.02	.13	T.	.03	.03		.20	.10	.04			.11	T.			T.	.31	.04						.10	T.							1.11
Duncan	Umatilla		.25	.25		.15		.15	.35				.60		.15			.15	.90						.30	1.10							4.35

TABLE 2.—*Daily precipitation for May, 1911. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon—Continued.																																	
Echo	Umatilla		T.	.04					.03				.28	.44			.24		.18						.02	.22		.09					1.54
Ella	Columbia		T.	.10				.08	.08			T.	.20	.05		T.	.03	T.	.07	T.					.05	T.	.05	T.					0.71
Embody	SE. drainage	T.	T.	.03	T.			T.	.04	T.				T.					.10	.30													0.47
Eugene	Willamette		.18	.09	.02	.59	.10		.03	.08	.05			.20	.20		.02	.13	1.04	.14					.23	.05							3.15
Fairview	Coast	.22	.16	.12	.08	.54		.45	.53	.14	.16	.22	.12	.06	T.	T.	.16	.60	1.08	T.						.25							4.89
Falls City	Willamette	.37	.11	.55	.36	.27	.26	.06	.32	.01			.23					1.95	.94					.15	.32	.02							5.92
Fir Glen	Coast	T.	T.	T.	T.	.50		T.	.55	.04			.20				.14	.36	2.50	T.					.21	T.							4.50
Florence	do	.54	.25	.52	.29	.64	.21	.41	.46	.11			.46	.31			.13	1.24	.31					T.	.39	.07							6.34
Forest Grove	Willamette	.16	.09	.24	.15	.48	.09	.10	.08	.03			.29				.80	.42	.04						.04	1.21	.16	.04					4.42
Fort Rock	SE. drainage		.05						.06				.05	.08			.15	.14													.03	0.56
Galice	Rogue	.06	.04	.06		T.		T.	.51	.01			.04	.02			.02	.55	1.20						.10								2.61
Gardiner	Umpqua	.60	.30	.40	.32	.58	.14	.60	.50	.50	.05	.11	.18	.04	.05			1.50	.50						.17		.17						6.71
Glencoe	Columbia				.06				.18					.28		.04		.08									.09						0.73
Gibbon	Umatilla		.08	.20		.13			.55	.15			.38	.60		.80	1.56	.43	.60						.20	.60	.40						6.68
Glendale	Umpqua	T.	.15	.04													.40	1.20							T.	.01							1.80
Glenora	Coast	.32	.50	2.00	.70	1.08	.39	.27	.49	.29			.49				.91	1.09	2.31					.40	.60	.31							12.15
Gold Beach	Rogue																																
Golden Falls	Coast	.34	.35	.19	.11	.94	.05	.50	.94	.09			.43	.12			.13	1.32	2.82	.14					.31	.10	.18						9.06
Granderonde	do																																
Granite	John Day		T.	.30	T.	.15			.10	.10			.12	T.	T.	.12	.16	.12	.18						T.	T.	T.	T.					1.35
Grants Pass	Rogue		T.	T.		.26		.02	.05				.10	.02			.01	.23	.46						.02								1.17
Grass Valley	John Day																																
Greenhorn	Snake	T.	.08	.10		.17	.05	T.	.12	.05	T.		.20	.04	.01	.07	.37	.40	.63	.06				.02	.05	T.	.15	.04					2.61
Gumboot	do		.20	.19	T.	.28	.29		.01				T.	.14	.03	.20	.35	.43	.85	.09				.11	.09	.07	.19	.02					3.54
Gurdane	Columbia	T.	T.	T.		T.			.64	.06			.22	.02	T.	.12	.14	.12	.40						.14	.09	.05						2.00
Happy Home	Umpqua	.41	.40	.58	.14	.84	.04	.48	.98	.10			.16	.10			.15	1.85	2.60	.10					.58		.10						9.61
Hay Creek	Deschutes	.04		.03		.04			.47	.03			.21		.12		.19	.18	.18								.34						1.83
Hazeldell	Willamette	.15	.18	T.	.16	.10		.34	.40	T.		.09	.24	.02	.19	.36	.28	.66	.56					.16	T.	T.							3.89
Headworks	do	.08	.92	.56	.25	.38	.21		.47	.50	.09		.73	.24	.03		.03	.74	.50	.41					1.19	.27	.18							7.78
Heppner	Columbia	.02	.03	.02		T.			.40	.04			.34	.09			T.	T.	.23						.68	.13	.05	.01						2.04
Hermiston	Umatilla	.08							.17				.28	.22		.21			.16						.14	.07	.18							1.51
Hermoso Rio	Deschutes	T.	.09	T.	T.		.02	.02	.09	.03			.09				.25	.15	.53															1.27
Hilgard	Gnd. Ronde	T.	T.	T.	.20	.30	T.		.20	.10				.40	.10	.50	.20	.30	.30						.20	.20	.20							3.20
Hood River	Columbia	.05	.05	.05	.06	.10	.60	.10	.35	.05	T.			.05				.70							.45	T.								2.61
Hoover	Willamette	.06	.51	.23	.20	.29	.25		.51	.33	.05		.11	.11		T.	.17	.98	1.84	.49					.14	.10	.06							6.43
Howardville	Grnd. Ronde		.43	.08	.04	.09	T.		.21	.19			.31	.03	.10	.23	.39	.33	.65	.05					.31	.07	.01	.06						3.58
Huntington	Snake		.01					.02								T.	.20	.08															0.31
Ibex Mine	John Day				.20				T.	T.			T.	.02			.04	.14	.30	.30						T.	.03	T.						1.03
Ironside	Snake				.12												.12		.12															0.36
Jacksonville	Rogue					.46							T.	.20			.44	.10	.30														.10	1.60
Joseph	Grnd. Ronde			.14					.10				.41	.30	.64	.45	.24	.32	.20	.03				.06	.20	.24	.36	.20					3.89
Klamath Agency	Klamath					.05			.03								.05																	0.13
Klamath Falls	do																																
La Grande	Grnd. Ronde	T.	.20	.05		.50	.01		.42	.20	T.		.15	.10	.08	.53	.45	.34	.36	.02					.32	.03	.03	.07						3.86
Lilyglen	Rogue		T.	.14		.65		.25	.13	.15			.25	.77	.04		.55	.12	.11	.19		.07		.08	.06							.44	4.00
Long Creek	John Day	T.	.50	.60		.20		.20	.15	.20		.40	.70	.50	.40	.80	.12	.36	.80						.25	T.	T.	.90						7.08
Long Valley	Pitt	T.	.01	.16		.19	.14		.09	T.			.01	.02				.64	.04						.12									1.42
McKenzie Bridge	Willamette	.13	.35	.18	.16	.23	.30	.02	.23	.01		.59	.21	.01	.10	.51	.53	.51	1.45	.08	T.				.15	.15	.01							5.91
McMinnville	do	.09	.01	.08	.05	.39	.02	.01	.08	T.			.22				.04	.64	.42						.77	.03								2.85
Marshfield	Coast	.26	.31	.20	.18	.72	.03	.36	.66	.15			.17	.14	.01	T.	.10	.76	.89	.01				.02	.24	.02	.12					.01	5.36
Maury	Deschutes	.40								.10						.27	.18	.30					T.	T.	T.	T.	.32						1.57
Meacham	Umatilla		T.	.30				T.	T.	T.		.50	.50	.40		1.10	1.50	1.30	1.75	1.95					.95	1.70	1.90						13.85
Medford	Rogue		.01	T.		.53		T.	T.	.01			.08	.09	T.		.52	T.							T.							.25	1.49
Merrill	Int. drainage					.28		.05	.08										.14													.23	0.78
Metolius	Deschutes	.01	T.	.01				.01	.14	.01			.18		.05		.13		.24								.12						0.90
Mikkalo	John Day		.05	.06				T.	.11	.04			.19																				0.45
Miller Prairie	Columbia				1.50								.40					1.30															3.20
Miramonte farm	Willamette																																
Monroe	do	.20	.06	.22	.21	.24	.17	.04		.20			.18	.15			.11	1.08	.47					.11	.15	.04							3.63
Mountain Home	Columbia		.07	.21	.52	.79	.24	.07	.21	.14			.62	.03				.74	.73	.07					1.06	.10							5.60
Mount Angel	Willamette	.13	.20	.28	.65	.42	.09		.14	.25			.82					.62	.47						.53	.12	.03						4.75
Mount Hood	Columbia																																
Mountain ranch	Rogue		.10			.48			.41									.71	.70														2.40
Musick	Umpqua	.45	.52	.75	.28	1.00	.10	.20	.66	.74	.10		1.00	.50	.10		.17	2.00	1.20	.50				T.	.75	.14	.05						11.21
Newport	Coast	.15	.09	.55	.64	.72	.15	.35	.42	.04			.40	.36		.06	.02	.90	.42	.02					.23	.02	.03						5.57
Ochoco	Deschutes	.02	.16	.05	T.	.06		.01	.16	T.			.20		.16		.24	.06	.10	T.					T.	T.	.34						1.56
Ochoco Creek	do		.04	.05	.07			T.	.30	T.			.33		.02		.23	.02	.09							.25							1.40
Owyhee	Owyhee		.04				.48		.04					.03		.23	T.	T.															0.82
Paisley	SE. drainage													T.			.10	T.	T.								T.	T.				T.	0.10
Paulina	Deschutes	.12	.15	.10		.05		.10	.40	.04			.10	.20			.20	.05	.05						T.		.25						1.81
Pendleton	Umatilla	T.	.07	.03		T.		T.	.11	T.			.32	T.		.12	.14	T.	.18			T.			T.	.39	.11						1.47
Persist	Rogue	.04	.05			.60		.09	.42	.21			.62	.18			.75	.22	.58	.04					.06								3.86
Pilot Rock	Umatilla	T.	.03	.01	T.	.02			.22				.30	.05		.05	.26	.02	.33	T.					.01	.14	.19	.05					1.68
Pompeii	Columbia	.17	.39	.14	.06	.23	.25	T.	.69	.65	.11		.50	.28	.25		.12	.60	1.90	.30					.46	.24	.06						7.40
Port and	Willamette	.07	.06	.39	.20	.32	.01	.06	.11	.18		.05	.40	.10		T.	.01	.73	.21	T.				.01	1.01	.03	T.						3.95
Port Orford	Coast	.22	.24	.35	.47	1.54	.20	.90	.64	.24			.10	.20			.22	1.00	.21						.62	T.							7.15
Post	Deschutes		.05	.10								T.	T.	.08			.17	.09							.44							.07	1.00
Power House	Walla Walla																																
Prineville	Deschutes	.05	T.	.03					.32	.04			.09	T.	.40	T.	T.	T.	.10							.02	.11	T.					1.16
Prospect	Rogue	.08	.08	.05		.33		.05	.51	.35			.51	.15			.65	.23	.91						.05	T.						.50	4.45
Ramsey	Columbia	.02	.14	.01	.03	T.		.01	.22	.10			.15					.25							.12	.22							1.27
Range	John Day		.01	.01			.01		.05	.02			.03	.01			.04	.01	.02						.03		.04						0.28
Ray Creek	Columbia	.01	.09	T.		T.	T.	T.	.27	.04		.04	.26	T.		T.	T.	T.	.15					T.	T.	.14	T.						1.00
Redmond	Deschutes																																
Reston	Umpqua	.03	.03	.01		.38			.58	.03			.10	.04			.10	.36	1.38	.04				.03	.09	.01	.05						3.26
Richland	Snake		.14	.07												.53	.25		.25					.05			.05						1.34
Riverdale	Deschutes		.16	T.	T.	.02			T.	.10		.05	.20			.05	.05	.07						T.			.08						0.78
Riverside	Malheur																																
Rock Creek	Willamette	.21	.30	.41		.65	.25		.23	.08			.24	.11			.10	1.50	1.43						.30	.05							5.86
Roseburg	Umpqua	.03	.07	.01	.12	.54			.09	.03		.04	.16	.08			.13	.27	.11	.02				T.	.04	.01							1.75
Rosland	Deschutes	.07	.08	.08		.06	.06	.05	.17	T.			.15	.04	.02		.48	.06	.42	.02					T.		.04						1.80
Salem	Willamette	.09	.06	.20	.21	.47	.02	.04	.04	.14			.16	T.			T.	.35	.40					T.	.42	.04	.14						2.78
Seneca	SE. drainage			.15		.06				.14			.15				.18		.17						.10	.04							0.99
Silver Lake	do		.10	.20		.05			.08				.10	.02	.02		.10	T.	.15													T.	0.82
Siskiyou	Rogue		.08			.42				.12				.27			.61	.11	.26	.03					.20	.04						.12	2.26
Sisters	Deschutes		T.	T.	.06			.03	.07		.06						.33	.05	.27														0.87
Sparta	Snake	.15	.08	.03		.22			.01	T.			.02			.12	.37		.13				.06			.06							1.25
Stafford	Willamette	.12	.10	.34	.23	.47	.18	.05	.04	.23	.01		.35	.04	.01		.08	.53	.92	.13					1.03	.51	.04						5.41
Starkey	Grnd. Ronde		.02	.02		.25			.20	.05			.21	.37	.05	.36	.20	.08	.23	.01					.37		.23	.04				T.	2.69
Sugar Creek	Deschutes			.25	.10								.33				.15	.11	.15														1.06
Summit	Willamette	.16	.08	.26	.08	.52		.46	.27	.07			.50	.05			1.25	1.16							.43	.13							5.42
Summit Prairie	Deschutes		T.	.16						.06			.21				.17	.22								T.	.17						0.99

TABLE 2.—*Daily precipitation for May, 1911. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon—Continued.																																	
Susanville	John Day.	....	T.	.10	....	.10	....	....	.40	.20	....	....	.30	.20	.05	T.	.20	.10	.30	....	....	....	....	....	....	.20	.10	....	....	....	....	.06	2.31
Tamarack	do.	.60	.10	.50	.60	.20	....	....	.30	.10	....	....	.25	.10	....	....	.12	.35	.33	....	....	....	....	....	.30	.70	....	....	....	....	....	....	4.55
Telocaset	Snake	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
The Dalles	Columbia	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Tinroof Cabin	Umatilla	....	.05	.08	....	.14	....	....	.50	.12	....	....	.32	.36	....	.17	.72	.08	.28	....	....	....	....	....	.30	.20	.41	.15	....	....	....	....	3.88
Toledo	Coast	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Trail	Rogue	.02	.02	....	....	.47	....	....	.07	.02	....	....	.05	.06	T.	....	.53	.07	.34	....	....	....	....	....	....	....	....	....	....	....	....	T.	1.65
Trask	Coast	....	....	1.60	2.40	1.10	.35	.28	.55	....	....	.80	1.00	.16	....	....	.16	.63	1.92	2.00	.32	....	....	.08	.70	.30	....	....	....	....	....	....	14.35
Umatilla	Columbia	T.	.09	T.	....	....	....	.04	.10	T.	....	....	....	.54	....	.14	....	....	....	.17	....	....	....	....	.18	.27	....	....	....	....	....	....	1.53
Unity	Snake	T.	T.	.08	....	T.	.06	....	.07	.04	....	....	T.	....	....	.04	.17	.01	.13	....	....	....	....	.03	....	....	....	....	....	....	....	....	0.63
Vale	Malheur	....	T.	.03	....	.05	.26	....	....	....	....	....	....	....	....	.32	.32	.09	.08	....	....	....	....	....	....	....	....	....	....	....	....	....	1.15
Valley Falls	SE. drainage	....	T.	T.	....	.04	T.	T.	T.	....	....	....	....	.05	....	....	.03	.10	T.	....	....	....	....	T.	....	....	.15	....	....	....	....	.24	0.61
Van	Malheur	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Wallace Orchard	Willamette	.10	.06	.31	.17	.47	.13	.03	.09	.06	....	....	.37	.01	....	....	.06	.50	.47	....	....	....	....	....	.71	.13	.01	....	....	....	....	....	3.68
Walloupa	Grnd. Ronde	....	.24	.08	....	.03	T.	....	.13	.03	....	....	.22	.15	.04	.14	.55	.30	.58	.18	....	....	....	....	.22	.02	T.	.06	....	....	....	....	2.97
Wallowa	do.	T.	.43	.03	.02	.05	T.	....	.11	.07	....	....	.18	.08	.09	.28	.33	.16	.54	.05	....	....	....	....	....	....	.73	.02	....	....	....	....	3.17
Wamic	Deschutes	....	T.	....	....	....	....	....	....	....	....	....	....	T.	....	....	....	T.	.16	....	....	....	....	....	....	....	.08	....	....	....	....	....	0.24
Warmspring	do.	T.	T.	T.	....	....	....	....	.18	....	.10	....	....	....	....	.10	.03	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	0.41
Wasco	Columbia	....	.12	....	.08	....	....	.57	....	.03	....	....	.12	....	....	....	....	.07	.03	....	....	....	....	....	.25	....	.07	....	....	....	....	....	1.34
Welches	do.	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	.....
Westfall	Malheur	....	.09	....	....	....	....	....	....	....	....	....	....	....	....	.25	.15	.04	....	....	....	....	....	....	....	....	....	.06	....	....	....	....	0.59
Weston	Walla Walla	T.	.28	.04	T.	.03	T.	T.	.48	.03	....	....	.38	.03	.20	.52	1.99	.10	.34	....	....	....	....	....	T.	.23	.40	T.	....	....	....	....	5.05
Williams	Rogue	....	....	....	....	....	....	....	.15	....	....	....	....	....	....	....	.05	.10	.60	.05	....	....	....	....	....	....	....	....	....	....	.10	....	1.05
Yonna	Int. drainage	T.	....	....	....	.16	....	....	.10	.06	....	....	T.	....	....	....	.08	.09	.18	....	....	....	....	....	....	....	....	....	....	....	....	T.	0.67

* Precipitation included in that of the next measurement.
‡ Separate dates of falls not recorded.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 3.—*Maximum and minimum temperatures at selected stations for May, 1911. District No. 12, Columbia Valley.*

Date.	Montana.				Afton, Wyo.		Idaho.																			
	Kalispell.		Missoula.				Boise.		Bonners Ferry.		Hot-spring.		Lewiston.		Mackay.§§		Meadows.		Pocatello.		Salmon.		Shoshone.		Vernon.		Wallace.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	67	30	68	29	55	28	68	50	72	28	70	41	78	41	45	28	.....	.....	62	34	62	37	65	34	56	40	69	31
2	60	38	63	47	57	31	66	48	60	34	72	45	70	50	47	30	.....	.....	61	42	60	43	65	41	56	33	60	42
3	62	36	68	40	58	34	71	47	55	40	77	46	66	48	55	34	.....	.....	70	47	65	44	72	45	63	38	61	41
4	69	45	76	42	70	32	85	56	70	44	89	51	81	52	70	36	.....	.....	78	45	77	44	83	43	75	38	70	43
5	78	41	86	43	79	34	69	38	59	33	87	52	67	45	75	39	.....	.....	81	39	82	42	78	42	80	45	70	46
6	49	35	64	36	70	30	54	35	59	35	62	39	62	40	71	34	.....	.....	54	36	56	42	55	36	69	36	50	36
7	63	28	67	27	67	22	70	42	65	26	74	37	71	38	72	34	.....	.....	69	31	70	31	71	30	68	26	65	30
8	61	38	66	44	74	37	60	46	56	29	72	50	62	38	72	39	.....	.....	68	47	66	44	65	48	70	.....	56	41
9	54	35	58	33	64	30	55	34	55	37	62	36	54	37	55	38	.....	.....	54	38	53	37	58	34	59	39	52	38
10	52	37	52	40	48	24	57	32	59	36	65	28	63	38	53	25	.....	.....	54	33	55	29	60	30	54	28	54	36
11	58	40	66	32	57	24	69	41	60	35	72	34	73	38	56	27	.....	.....	64	38	62	32	68	28	60	24	65	32
12	62	41	64	41	68	25	67	48	59	32	80	45	59	48	67	27	.....	.....	73	40	76	34	72	38	62	26	62	42
13	52	41	71	36	69	51	56	41	57	28	60	44	57	47	69	28	.....	.....	66	44	65	44	70	37	65	31	52	37
14	62	40	59	41	69	34	67	41	65	28	68	42	64	48	67	28	.....	.....	75	41	67	43	69	35	73	30	61	40
15	61	40	57	45	62	39	53	46	62	36	73	47	61	45	42	32	.....	.....	57	41	60	44	64	43	63	42	63	39
16	54	40	60	44	52	31	61	42	55	32	66	44	64	51	47	34	.....	.....	60	40	60	42	49	40	65	38	54	46
17	57	41	60	40	51	31	56	40	56	40	64	45	62	47	47	36	.....	.....	56	38	55	37	57	34	65	35	56	42
18	54	42	54	40	54	30	54	43	52	35	63	42	56	47	53	32	.....	.....	49	36	50	37	51	37	50	30	50	36
19	55	42	56	38	52	32	57	42	59	36	65	30	66	46	50	31	.....	.....	54	36	54	36	56	35	55	30	52	38
20	63	39	64	41	54	26	63	38	66	30	67	35	72	40	60	30	.....	.....	60	34	61	37	63	32	58	27	63	34
21	62	38	68	32	62	25	74	44	63	40	77	38	73	44	61	32	.....	.....	70	36	70	34	70	34	66	31	66	36
22	60	37	72	33	65	33	74	53	60	29	78	50	68	45	66	36	.....	.....	69	49	74	46	65	46	63	39	60	38
23	56	32	61	31	74	32	65	44	60	36	75	45	69	40	62	40	.....	.....	73	48	62	38	69	45	72	44	62	30
24	45	35	57	39	73	37	59	45	52	35	70	45	57	43	60	38	.....	.....	68	48	69	39	68	44	68	41	47	34
25	50	34	58	36	66	30	59	34	66	35	64	38	60	40	61	40	.....	.....	54	40	57	42	60	40	65	39	56	34
26	58	35	50	39	48	29	61	36	70	30	67	37	64	43	50	40	.....	.....	57	36	55	42	.....	.....	58	32	60	35
27	55	35	59	33	47	30	62	36	73	33	68	35	67	39	56	31	.....	.....	55	37	55	31	58	35	52	32	55	38
28	58	34	58	32	61	25	69	39	82	38	70	35	72	42	57	30	.....	.....	64	34	63	33	64	36	60	30	61	34
29	66	32	68	30	65	35	73	43	81	37	78	40	77	41	67	30	.....	.....	72	37	70	34	70	39	70	42	72	32
30	72	38	79	34	74	31	80	44	78	38	84	42	85	46	70	36	.....	.....	79	41	76	34	78	41	76	35	80	39
31	83	44	85	41	78	33	81	59	90	38	85	57	91	50	75	44	.....	.....	81	46	82	39	79	55	80	46	87	43
Mns..	59.9	37.5	64.3	37.4	62.7	31.1	65.0	42.8	63.7	34.4	71.7	41.8	67.5	43.8	59.9	33.5	.....	.....	64.7	39.7	64.2	38.4	65.7[a]	38.6[a]	64.4	34.9[a]	61.0	37.5

Date.	Washington.																									
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.		Tatoosh Island.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	54	39	70	40	75	28	64	36	73	41	50	44	76	40	77	36	54	41	61	45	76	44	71	37	59	42	52	42
2	52	46	58	47	64	48	56	46	68	45	49	44	66	44	78	39	52	42	59	48	64	46	60	49	59	46	49	44
3	52	44	57	46	60	45	54	45	62	44	49	45	65	42	69	40	50	39	56	46	66	46	59	48	57	47	50	44
4	59	42	62	44	75	45	70	46	59	46	52	45	68	49	70	41	55	41	63	46	75	50	72	50	65	46	53	41
5	54	42	62	45	64	42	55	41	64	44	50	42	66	46	75	39	52	38	54	45	69	46	71	43	54	42	49	43
6	57	39	56	37	59	33	58	38	62	39	49	43	64	30	72	35	49	38	56	41	63	34	55	37	58	40	49	40
7	57	42	58	43	68	28	68	43	62	40	51	46	72	37	76	30	54	40	59	45	75	39	66	33	60	46	48	44
8	55	42	54	45	65	43	60	40	58	43	50	43	72	41	74	31	51	44	59	45	64	41	59	43	56	44	48	45
9	49	42	52	43	69	38	58	40	66	42	49	44	63	39	79	33	52	43	50	44	62	38	54	38	50	43	48	43
10	55	39	55	44	65	35	57	39	71	41	50	44	68	42	77	32	51	37	55	42	67	40	59	38	56	43	50	43
11	50	34	54	44	67	32	67	32	62	46	49	44	72	40	70	30	49	33	57	40	73	41	66	40	57	36	48	44
12	51	41	54	46	56	46	55	41	64	43	48	44	68	49	60	43	48	43	52	45	70	46	58	44	53	44	51	43
13	55	43	57	45	58	39	58	40	71	41	49	45	64	43	66	36	53	43	52	44	68	43	54	40	54	44	49	46
14	61	40	59	46	67	32	63	43	77	46	50	46	67	39	68	33	54	45	59	47	66	40	64	40	60	46	53	45
15	59	47	63	38	71	37	70	37	65	47	49	46	78	48	74	49	51	43	64	44	72	52	62	48	67	43	47	44
16	55	43	61	48	62	49	58	45	63	51	51	45	68	53	73	40	54	44	56	47	65	45	55	47	56	46	52	42
17	51	42	54	47	58	42	55	43	62	45	50	44	59	42	66	44	52	42	55	46	56	43	57	42	57	45	48	43
18	54	44	59	47	56	44	54	42	66	45	51	46	64	42	62	38	55	42	58	46	62	39	55	44	57	45	52	44
19	55	39	60	46	67	35	56	41	69	45	50	45	66	36	64	36	54	39	58	44	66	39	62	41	57	44	52	45
20	58	42	62	35	73	31	76	36	74	44	51	44	70	49	78	34	53	34	64	43	74	37	66	42	64	43	54	45
21	60	43	58	48	68	38	70	43	74	51	50	46	80	48	76	38	54	43	62	49	78	53	71	43	62	48	55	46
22	56	40	58	45	75	36	58	40	66	49	48	46	78	48	72	33	54	41	54	44	72	46	60	43	55	42	54	45
23	57	42	67	38	64	29	59	34	59	46	51	44	68	37	64	36	61	41	56	43	69	38	64	38	55	40	56	43
24	64	41	67	38	60	44	47	39	57	45	52	46	65	44	63	40	67	38	61	45	65	41	50	40	58	45	66	45
25	59	45	64	49	61	36	54	41	56	44	52	46	60	41	62	39	54	42	57	47	59	42	54	40	56	47	53	47
26	59	37	64	36	68	30	60	42	69	39	53	46	70	40	68	34	54	42	61	46	69	39	60	38	61	45	49	45
27	58	43	62	43	69	30	66	42	71	39	50	46	72	42	69	33	54	40	58	46	70	41	61	39	59	45	51	46
28	72	35	65	36	72	34	79	34	76	43	55	45	78	46	70	38	63	41	68	45	80	45	64	42	66	44	55	46
29	78	42	68	40	82	36	84	38	82	44	53	49	82	46	80	39	57	36	78	49	80	44	75	40	76	46	52	45
30	68	42	70	42	88	40	85	41	86	52	51	45	89	46	85	42	59	45	77	51	88	55	81	47	75	50	54	45
31	64	44	72	44	90	43	87	44	91	55	51	46	94	56	90	46	65	40	77	54	92	62	87	48	75	52	57	46
Mns..	57.7	41.5	60.7	43.1	67.6	37.7	63.3	40.4	67.9	44.7	50.6	45.0	70.7	43.1	71.8	37.3	54.4	40.6	59.9	45.5	70.2	43.7	63.0	42.0	59.8	44.5	51.7	44.2

TABLE 3.—*Maximum and minimum temperatures at selected stations, May, 1911. District No. 12*—Continued.

Date.	Walla Walla, Wash.		Oregon.																			
			Ashland.		Baker.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	78	52	59	45	63	36	65	45	.....	.....	70	51	57	42	55	46	62	46	62	46	.....	.....	72	30
2	68	48	62	46	59	41	61	47	.....	.....	80	32	57	49	59	51	58	44	64	50	.....	.....	72	43
3	66	50	64	44	58	42	61	48	.....	.....	75	30	57	46	57	49	59	41	63	47	.....	.....	70	45
4	81	54	74	45	76	46	64	48	.....	.....	74	33	68	50	67	50	78	45	76	46	.....	.....	89	45
5	71	45	64	36	65	34	69	40	.....	.....	75	50	57	42	54	43	67	40	60	40	.....	.....	87	48
6	62	40	66	31	54	32	53	40	.....	.....	66	34	58	37	60	43	67	36	67	38	.....	.....	63	31
7	72	40	63	40	60	35	60	39	.....	.....	77	32	56	39	65	47	71	38	66	41	.....	.....	67	33
8	57	43	53	37	55	38	68	38	.....	.....	74	40	52	41	54	44	64	33	53	39	.....	.....	68	38
9	58	39	60	38	48	27	54	40	.....	.....	65	38	52	42	54	44	65	43	56	39	.....	.....	66	31
10	65	44	65	36	55	29	55	38	.....	.....	67	44	55	37	58	44	73	43	64	35	.....	.....	67	28
11	72	41	72	38	65	32	57	35	.....	.....	76	33	58	35	64	41	64	35	73	34	.....	.....	75	33
12	59	46	66	45	58	38	66	41	.....	.....	74	45	54	45	58	46	60	35	54	45	.....	.....	69	40
13	59	45	56	37	49	36	67	42	.....	.....	75	37	55	43	55	45	65	37	59	43	.....	.....	65	41
14	63	43	68	41	54	34	60	43	.....	.....	74	35	57	45	62	46	60	45	64	44	.....	.....	70	40
15	61	50	67	38	53	40	61	40	.....	.....	71	49	52	46	63	50	64	32	67	38	.....	.....	66	51
16	62	50	59	43	53	37	67	46	.....	.....	71	48	60	40	62	48	54	42	60	44	.....	.....	61	47
17	60	46	56	41	49	34	60	46	.....	.....	66	42	54	44	54	46	60	51	61	47	.....	.....	56	36
18	59	47	52	39	49	37	50	44	.....	.....	66	54	53	46	58	45	53	22	53	38	.....	.....	69	41
19	64	44	62	35	54	36	51	34	.....	.....	66	50	56	39	59	41	50	29	62	37	.....	.....	64	41
20	69	41	78	38	63	33	59	34	.....	.....	74	37	63	36	70	41	54	35	76	36	.....	.....	72	33
21	75	51	78	47	69	39	67	37	.....	.....	72	38	59	39	70	51	50	35	76	43	.....	.....	76	35
22	68	46	70	50	63	41	70	40	.....	.....	75	35	54	37	67	43	64	33	67	43	.....	.....	81	53
23	68	41	62	39	51	35	59	40	.....	.....	82	39	51	44	55	44	53	30	57	41	.....	.....	67	44
24	60	42	55	37	55	35	54	40	.....	.....	74	45	51	38	49	39	50	35	52	42	.....	.....	66	45
25	60	42	63	39	50	30	54	45	.....	.....	65	44	54	46	57	47	56	24	58	44	.....	.....	66	29
26	60	44	65	40	54	38	56	43	.....	.....	69	45	59	45	60	46	53	22	64	43	.....	.....	66	44
27	69	46	71	38	56	32	61	39	.....	.....	74	40	57	38	64	45	52	35	72	38	.....	.....	70	33
28	71	41	82	43	64	32	65	37	.....	.....	78	38	58	44	78	46	64	30	78	40	.....	.....	75	33
29	75	46	84	46	68	37	75	42	.....	.....	81	39	69	42	82	54	62	33	86	44	.....	.....	78	35
30	84	53	85	50	77	38	79	46	.....	.....	89	45	59	42	84	56	66	56	87	46	.....	.....	84	39
31	89	53	81	50	81	46	82	51	.....	.....	92	45	57	48	84	57	68	40	74	52	.....	.....	89	52
Means	67.2	45.6	66.5	41.0	59.0	36.1	62.3	41.5	.....	.....	73.8	40.9	56.7	42.2	62.2	46.4	60.8	36.8	65.5	42.0	.....	.....	71.2	39.3

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
§ Data are from standard instruments not supplied by the United States Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.

PAPERS ON CLIMATOLOGY IN RELATION TO AGRICULTURE, TRANSPORTATION, WATER RESOURCES, ETC.

CORRELATION.

By J. WARREN SMITH, Professor of Meteorology.

An attempt will be made in the following paper to explain some of the simplest methods of correlation. The relation of the weather in June and July to the yield of potatoes, in Ohio, will be used for a concrete example.

Figure No. 1 illustrates the common method of showing the correlation between two or more factors. A normal horizontal line is drawn through the center of the chart, figures at the left indicate the values above or below the normal and the years are given at the top of the page.

Dots are made on the line under each year opposite the proper departure figures and then these dots are connected by straight lines.

In this chart the solid line, A, shows the departure of the potato yield from the normal from year to year, in Ohio. The broken line, B, indicates the departure of the rainfall of Ohio for June and July of each year from the normal. The dotted line, C, shows the departure of the average temperature from the normal for the same months.

It is customary to say that when two curves run together—that is, when one runs above the normal line and the other does the same, and when one goes below the normal line and the other usually follows—they show a correlation between the factors.

On this chart, therefore, inasmuch as the lines A and B, representing, respectively, potato yield and rainfall, appear to follow each other in a general way, we may assume that there is some relation between the rainfall of June and July and the yield of potatoes.

On the other hand, a careful inspection of curves A and C indicates an opposite bending of the lines, and hence there must be a negative correlation.

The trouble with this method of correlation, however, is that while with two curves only a very general comparison can be made, with three or more curves there seems to be only a confusion of lines.

Figure No. 2: If three curves are to be used, it is far better to arrange the years so that one of the factors will have an increasing or decreasing value, as in diagram 2.

In this chart the years are arranged so that the curve showing the yield of potatoes runs from the highest yield regularly to the lowest. Then by drawing the other curves for the years as shown at the top broad general correlations can be shown. It will be found better in practice, however, to put only two curves on the same diagram.

Examination of the curves on this chart indicates a slight general relation between the yield and rainfall, and a strong opposite relation between the yield and temperature. When the yield is above the normal the temperature is nearly always below the normal, and when the yield is down the temperature is generally high.

The correlation between the temperature and yield is brought out much more clearly, however, by means of the dotted chart, as on figure 3.

On this the normal temperature is indicated by the horizontal line and the normal yield by the perpendicular line. At the right are figures showing temperature values above or below the normal and at the top figures indicating yields above or below the normal.

By taking the temperature and yield departures for each year and placing a dot on the chart where the lines indicating the departure values intersect, the grouping of the dots will show the correlation of the two factors.

If there is no close correlation between the two factors the dots will be scattered indiscriminately over the chart. If there is a relation, however, the dots will be grouped systematically, as shown on chart 3. It will be seen at a glance that the above-normal yield dots, with two exceptions, are grouped in the below-normal temperature side and the below-normal yield dots are, with one exception, all grouped on the above-normal temperature side.

Figure No. 4: In a study of the effect of weather conditions upon the growth of crops it is often necessary to combine the influence of two different factors, as rainfall and temperature. This can not be done by the curve method, but it can by a modification of the dotted chart.

In figure No. 4 the horizontal line and the figures at the right indicate temperature values, as in figure No. 3. The perpendicular line shows the average rainfall and the figures at the top the departure from the normal of the rain for June and July.

The upper left-hand quadrant shows conditions warm and dry; the upper right-hand quadrant, warm and wet; the lower right hand, cool and wet; the lower left, cool and dry.

By placing the yield dot at the intersection of the lines showing the departure of the rainfall and temperature from the normal, for each year, we have a chart giving the combined effect of rainfall and temperature upon the yield.

If we indicate the yields above normal by crosses and the yields below normal by the minus signs, a very decided grouping will be found if there is a distinct relation between the factors. In practice it will be found better to use red and blue dots to indicate yields above or below the normal and to place the yield-departure figures beside each dot.

By this figure it can be seen at a glance that there has never been a poor potato yield in Ohio in the 27 years under discussion when June and July have averaged cool and wet, and but one poor yield when these months have been cool and dry.

Also that there has been but one year when these months have averaged warm and wet, and that year the crop was poor. It takes but a glance also to see that warm and dry weather in June and July is distinctly unfavorable for potatoes.

While both the curve and the dotted diagrams are of value to illustrate the relation that has been determined and are of value oftentimes in finding whether there may be a correlation between two factors, neither of them answers the question as to the exact value of the correlation.

In figure No. 4, for example, it seems perfectly plain that there is an inverse relation between the temperature and the potato yield, but it is impossible to say positively whether the rainfall is favorable or not. There are nine crosses on one side of the normal precipitation line and eight on the other.

To ascertain this and answer questions of correlation in general, the writer has made use of the common correlation table as shown in Tables 1 and 2.

It is not the province of this paper to go into a mathematical discussion of these tables because the principle on which they operate is well established. It is sufficient to say that if the correlation coefficient, r, as determined by the table is $+1$ there is an exact correlation between the factors, and if the correlation coefficient is -1 there is an exact negative or opposite relation.

If, on calculation, r is found to be near zero, then there is little or no correlation between the two factors. In practice it is safe to say without question that there is a well-defined relation if the correlation coefficient is six times the probable error.

The probable error is found by the following equation, in which r is the correlation coefficient and n is the number of years under consideration:

$$0.674\frac{1-r}{\sqrt{n}}$$

In Table 1 the correlation coefficient is found to be 0.50, which shows a fairly well-defined relation between the rainfall for June and July and the potato yield. This is not quite six times the probable error, which is ± 0.097, yet it shows the beneficial effect of the rainfall much more conclusively than either the curve or the dotted diagrams.

In Table 2 the value of r is found to be -0.69 and the probable error ± 0.10. This indicates a very strong inverse relation between the temperature for June and July and the yield of potatoes, as would be expected from the curve and dotted diagrams.

From these charts and tables the conclusion is that June and July should be moderately wet and must be cool to produce a good potato yield in Ohio.

EXPLANATION OF FIGURE NO. 3.

The horizontal line indicates the average temperature for Ohio for June and July. The figures at the right show temperature values above or below the normal. The perpendicular line is drawn for the average yield of potatoes, and the figures at the top of the chart indicate yields above or below the normal in bushels per acre. To make this chart, place a dot at the intersection of the lines showing the departure of the temperature and of the yield from the normal. If there is no connection between the weather element and the yield the dots will be scattered all over the diagram. In this chart practically all of the yields above the normal fall into the quadrant showing temperatures below normal, while the yields below normal correspond with temperatures above normal.

EXPLANATION OF FIGURE NO. 4.

This is used for correlating three factors. The average temperature for June and July is shown by the horizontal line and the values above or below the normal by the figures at the right. The perpendicular line shows the average rainfall for June and July, with the figures on each side indicating the amounts above or below the normal. To work this chart, place a dot for each year where the temperature and rainfall value lines intersect, marking a plus sign if the yield is above the normal and a minus sign if below normal. In practice it will be found better to indicate the above-normal yield values by red dots and the below normal in blue. It is of advantage also to put the figures showing the amount of the yield above or below the normal beside each dot. This chart shows the combined effect of rainfall and temperature upon the crop yield.

TABLE 1.—*Rainfall and potato yield, Ohio, 1883 to 1909.*

Year.	Rainfall.			Yield.			Product of columns 3 and 6.
	Rainfall.	Departure.	Square of column 3.	Yield.	Departure.	Square of column 6.	
1	2	3	4	5	6	7	8
	Inches.	*Inches.*		*Bushels.*	*Bushels.*		
1883	8.4	+0.3	0.09	99	+25	625	+ 7.5
1884	6.8	−1.3	1.69	75	+ 1	1	− 1.3
1885	7.5	− .6	.36	75	+ 1	1	− .6
1886	6.4	−1.7	2.89	78	+ 4	16	− 6.8
1887	5.9	−2.2	4.84	30	−44	1,936	+ 96.8
1888	7.8	− .3	.09	80	+ 6	36	− 1.8
1889	8.3	+ .2	.04	75	+ 1	1	+ .2
1890	6.5	−1.6	2.56	46	−28	784	+ 44.8
1891	8.6	+ .5	.25	98	+24	576	+ 12.0
1892	9.4	+1.3	1.69	60	−14	196	− 18.2
1893	5.8	−2.3	5.29	58	−16	256	+ 36.8
1894	4.2	−3.9	15.21	63	−11	121	+ 42.9
1895	4.5	−3.6	12.96	63	−11	121	+ 39.6
1896	12.9	+4.8	23.04	89	+15	225	+ 72.0
1897	7.5	− .6	.36	42	−32	1,024	+ 19.2
1898	6.8	−1.3	1.69	61	−13	169	+ 16.9
1899	7.1	−1.0	1.00	71	− 3	9	+ 3.0
1900	7.6	− .5	.25	76	+ 2	4	− 1.0
1901	7.2	− .9	.81	54	−20	400	+ 18.0
1902	12.2	+4.1	16.81	94	+20	400	+ 82.0
1903	7.7	− .4	.16	83	+ 9	81	− 3.6
1904	7.0	−1.1	1.21	98	+24	576	− 26.4
1905	8.6	+ .5	.25	78	+ 4	16	+ 2.0
1906	8.6	+ .5	.25	110	+36	1,296	+ 18.0
1907	9.9	+1.8	3.24	76	+ 2	4	+ 3.6
1908	6.6	−1.5	2.25	77	+ 3	9	− 4.5
1909	9.6	+1.5	2.25	96	+22	484	+ 33.0
Summary			101.53			9,367	+484.1

EXPLANATION OF TABLE.

Column No. 1 shows the years; No. 2 the total rainfall for Ohio for June and July, in inches and tenths; No. 3 the departure from the normal rainfall for these two months, the normal for 54 years being 8.1 inches; No. 4 the square of the departure as shown in column 3; No. 5 gives the yield of potatoes for Ohio in bushels per acre; No. 6 the departure from the normal potato yield, the average potato yield for the 27 years under consideration being 74 bushels per acre; No. 7, the square of the departure in column 6; column No. 8 shows the product of the departures in columns 3 and 6. Care must be taken to precede the product by the proper sign in this column, merely remembering that the product of two numbers with like signs is preceded by a plus sign, and the product of two numbers with unlike signs with a minus sign.

To determine the correlation coefficient, r, divide the algebraic sum of the values in column 8 by the square

root of the product of the sums of columns 4 and 7. The calculation in this case is $101.53 \times 9{,}367 = 951{,}031.51$. The square root of this product is 975.20. 484.1 divided by $975.20 = 0.50$, the correlation coefficient. This is moderately high, although it is not quite six times the probable error, which is ± 0.097.

TABLE 2.—*Temperature and potato yield, Ohio, 1883 to 1909.*

Year.	Temperature.			Yield.			Product of columns 3 and 6.
	Temperature.	Departure.	Square of column 3.	Yield.	Departure.	Square of column 6.	
1	2	3	4	5	6	7	8
1883	70.6	−0.8	0.64	99	+25	625	− 20.0
1884	71.3	− .1	.01	75	+ 1	1	− .1
1885	71.2	− .2	.04	75	+ 1	1	− .2
1886	69.8	−1.6	2.56	78	+ 4	16	− 6.4
1887	74.4	+3.0	9.00	30	−44	1,936	−132.0
1888	71.2	− .2	.04	80	+ 6	36	− 1.2
1889	69.6	−1.8	3.24	75	+ 1	1	− 1.8
1890	73.2	+1.8	3.24	46	−28	784	− 50.4
1891	70.0	−1.4	1.96	98	+24	576	− 33.6
1892	73.0	+1.6	2.56	60	−14	196	− 22.4
1893	72.6	+1.2	1.44	58	−16	256	− 19.2
1894	72.8	+1.4	1.96	63	−11	121	− 15.4
1895	71.8	+ .4	.16	63	−11	121	− 4.4
1896	71.4	.0	0	89	+15	225	.0
1897	71.8	+ .4	.16	42	−32	1,024	− 12.8
1898	71.0	− .4	.16	61	−13	169	+ 5.2
1899	72.8	+1.4	1.96	71	− 3	9	− 4.2
1900	72.0	+ .6	.36	76	+ 2	4	+ 1.2
1901	74.5	+3.1	9.61	54	−20	400	− 62.0
1902	70.4	−1.0	1.00	94	+20	400	− 20.0
1903	68.6	−2.8	7.84	83	+ 9	81	− 25.2
1904	69.9	−1.5	2.25	98	+24	576	− 36.0
1905	71.1	− .3	.09	78	+ 4	16	− 1.2
1906	71.0	− .4	.16	110	+36	1,296	− 14.4
1907	69.1	−2.3	5.29	76	+ 2	4	− 4.6
1908	71.6	+ .2	.04	77	+ 3	9	+ .6
1909	70.4	−1.0	1.00	96	+22	848	− 22.0
Summary			56.77			9,367	−502.5

TABLE 2.—*Temperature and potato yield, Ohio, 1883 to 1909*—Contd.

EXPLANATION OF TABLE.

This table is similar to table No. 1 except that columns 2 to 4 contain the average temperature data for Ohio for the months of June and July, instead of the rainfall as in Table 1. To determine the correlation coefficient multiply 56.77 by $9{,}367 = 531{,}764.59$. The square root of this is $729.22 - 502.5$ divided by $729.22 = -0.69$, quite a high negative coefficient. This is safely above six times the probable error, which in this case is ± 0.10. This indicates that the temperature for June and July has quite a high negative influence on the potato yield.

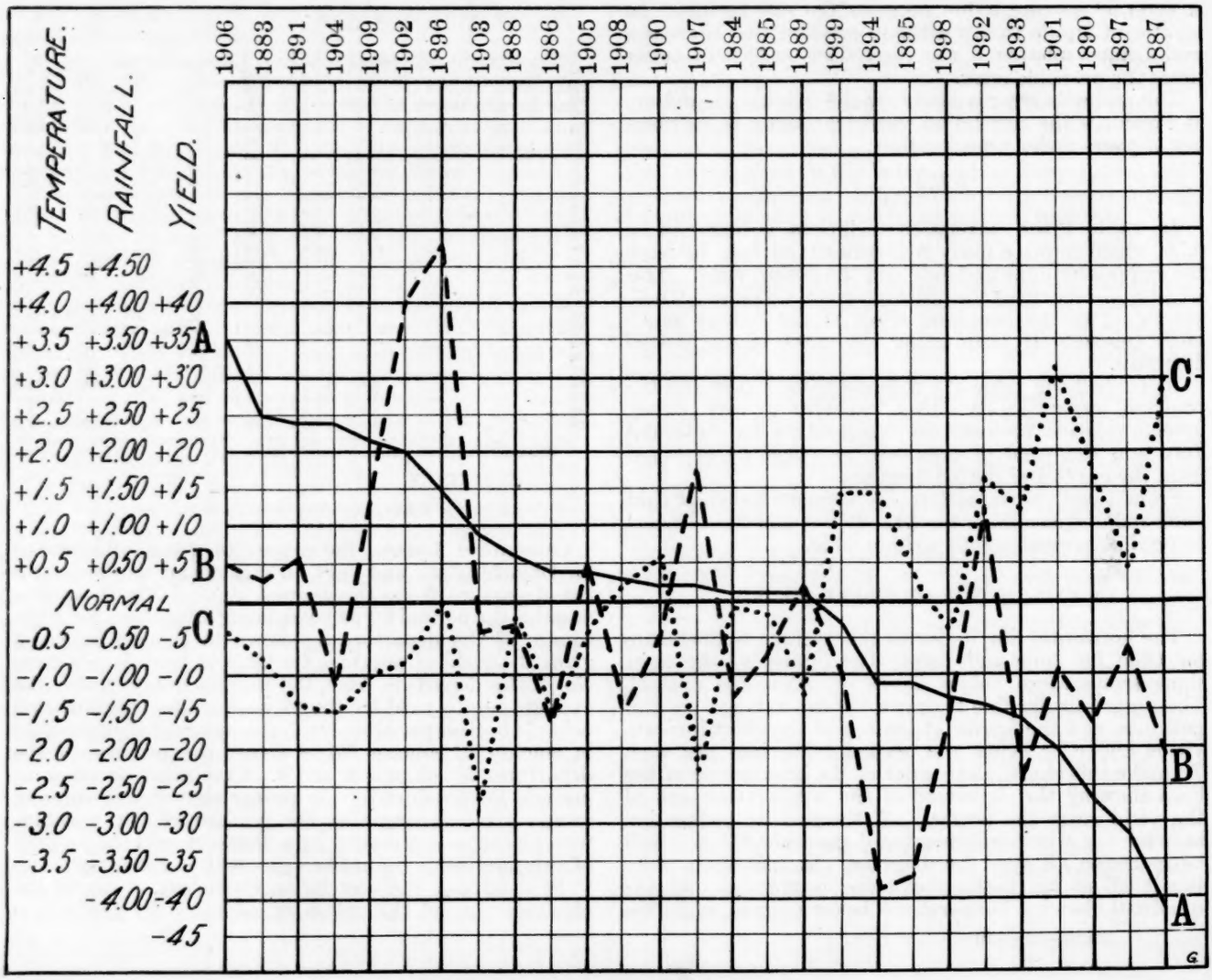


FIG. 1.—Relation of weather to yield of potatoes in Ohio, 1883–1909.
A—Yield of potatoes in bushels per acre.
B—Departure of rainfall from normal for June and July.
C—Departure of temperature from the normal for June and July.

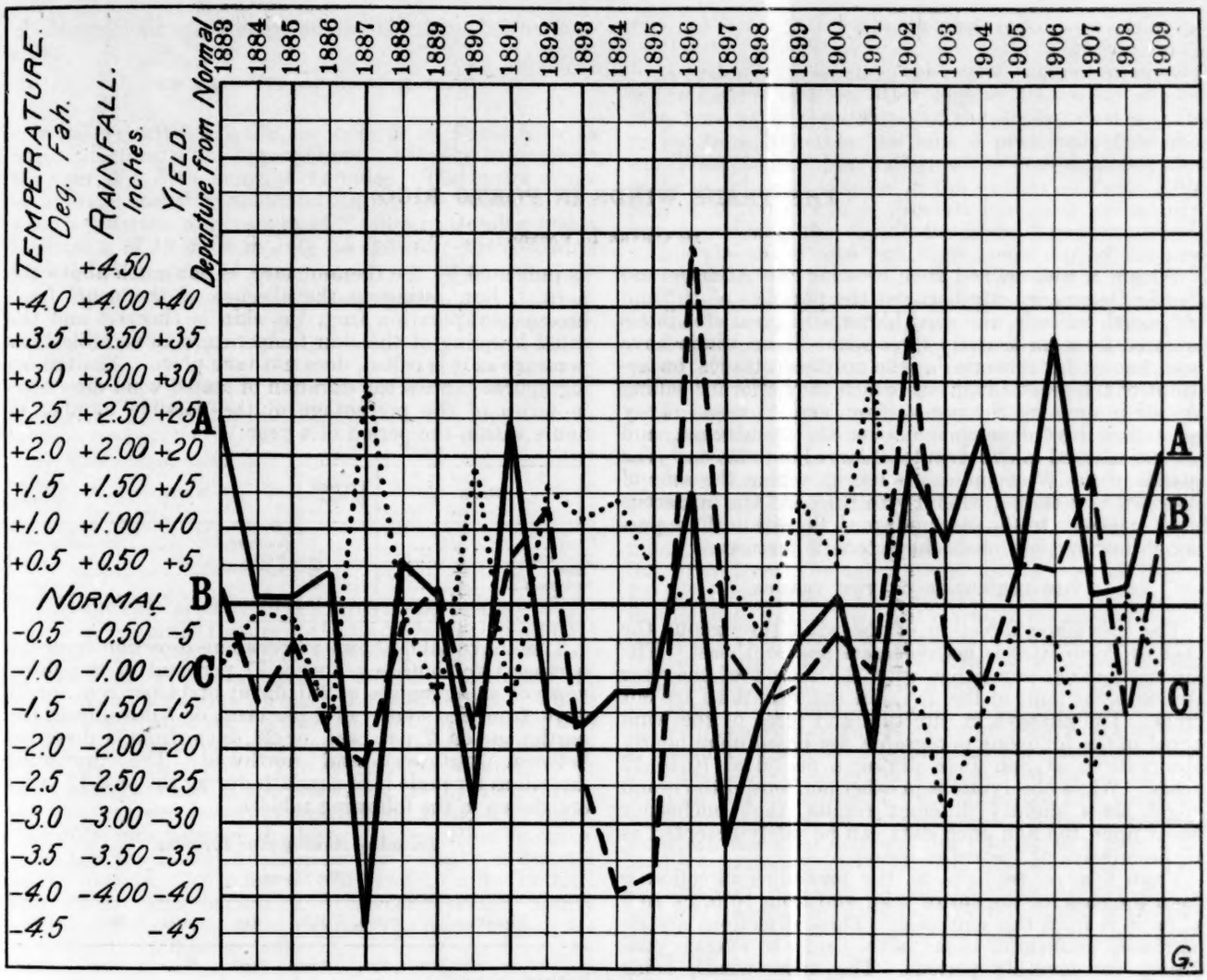


FIG. 2.—Relation of weather to yield of potatoes in Ohio 1883–1909.
A—Yield of potatoes in bushels per acre, departure from normal.
B—Rainfall departure from normal for June and July.
C—Temperature departure from normal for June and July.

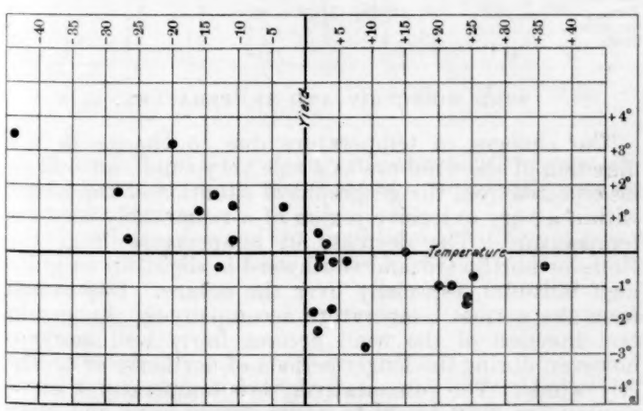


FIG. 3.—Temperature and yield of potatoes in Ohio, 1883–1909.

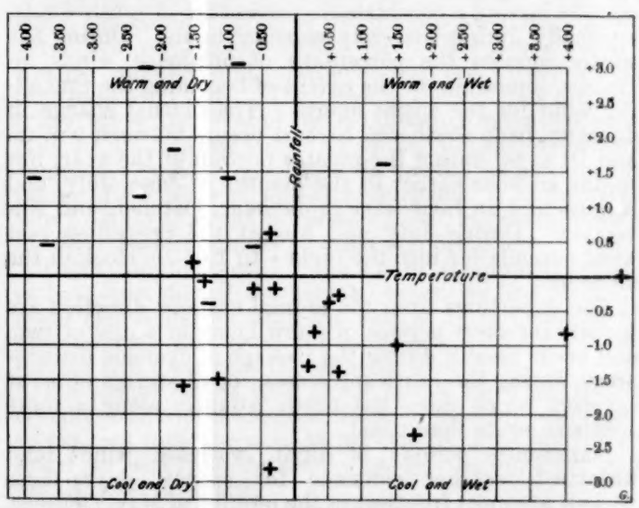


FIG. 4.—Relation of weather to yield of potatoes in Ohio, 1883–1909.

THE TRADE WINDS IN PORTO RICO.

By OLIVER L. FASSIG.

Within a well-defined zone crossing the Atlantic and Pacific Oceans, mostly between the parallels of 10° and 25°, north latitude, the wind blows with great steadiness of force from an easterly direction. These winds have been known for centuries as the northeast trades, on account of the great advantage which they afforded sailing vessels in crossing the oceans from east to west. They have their best development over the open ocean, and are less marked in the vicinity of large land masses. The islands of the West Indies are wholly within the zone of the northeast trades, while Porto Rico and the numerous smaller islands to the east and south lie within those portions showing their most characteristic features.

THE DIRECTION OF THE TRADES.

The prevailing direction of the wind throughout the year in Porto Rico is between east and southeast. The direction varies somewhat with the season of the year and with the hour of the day, but the variations are not great. The changes in direction and force of the wind noted in the following paragraphs are based upon hourly observations at San Juan during a period of 10 to 12 years. While observations in other portions of the island might show slightly different results, the conclusions based upon the San Juan data can be safely accepted as representative of the entire island.

From 9 a. m. to 10 p. m. the prevailing direction is from the east for the entire year, and from 10 p. m. to 9 a. m. it is from the southeast. These directions are remarkably uniform in so far as they refer to average conditions for monthly periods. The night winds, being lighter, vary somewhat more than those of the day. The months of October and November are apt to show the greatest departures from the normal direction, both months having a considerable percentage of south winds, especially during the early morning hours. During the winter months the percentage of northeast winds increases, sometimes to the extent of becoming the prevailing wind for the entire month. The diurnal change in direction from southeast to east occurs between 9 a. m. and 10 a. m. during the greater portion of the year, but begins an hour earlier in the months of June, July, and August and an hour later in January, October, and November. During July and August the prevailing east wind extends far into the night—to 1 or 2 o'clock in the morning.

The departures from the normal easterly direction are usually for short periods of a few hours or a day or two, and occur mostly during the passage of cyclonic disturbances during the hurricane season, or of storms of great severity which cross the north Atlantic along a more southern route than usual.

Sometimes periods of light, variable winds and unsettled weather continue for several days; these periods are most frequent in the months of May, October, and November, when the high humidity and light winds produce an oppressive atmosphere. The temperature, as indicated by the thermometer, is not much above the normal, but, owing to the absence of the usual fresh breezes, evaporation from the skin is checked and the usual lowering of the skin temperature, or sensible temperature as it is called, does not take place. The following figures express the duration of stated wind directions in terms of the percentage of the possible number of hours within the period of a year:

Winds.	Per cent of time.	Winds.	Per cent of time.
North	2	Southwest	5
Northeast	11	West	1
East	38	Northwest	1
Southeast	28		
South	14		100

The above table shows a prevailing direction from the northeast to southeast during 77 per cent of the entire year, or an aggregate of 281 days; of 14 per cent, or 51 days, from the south; of 2 per cent, or 7 days, from the north; and of 7 per cent, or 26 days, from a direction between southwest and northwest. The prevailing directions for periods of a month during the past 12 years are shown in the following table:

Prevailing monthly wind directions.

[For 12 years.]

Direction.	Jan.	Feb.	Mar.	Apr.	May.	June.
	Times.	*Times.*	*Times.*	*Times.*	*Times.*	*Times.*
Northeast	3	1	2	0	0	0
East	8	9	9	8	6	8
Southeast	1	2	1	4	6	4
South	0	0	0	0	0	0

Direction.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
	Times.	*Times.*	*Times.*	*Times.*	*Times.*	*Times.*	*Times.*
Northeast	0	0	0	0	2	3	0
East	11	12	6	2	7	7	10
Southeast	1	0	6	7	2	2	2
South	0	0	0	3	1	0	0

WIND DIRECTION AND TEMPERATURE.

The changes in temperature due to change in the direction of the wind are as a rule very small, a result to be expected from the geographical situation of the island within a very extensive region of a remarkably uniform temperature. The decrease in temperature from the Equator northward and southward is slight up to quite high latitudes, especially over the oceans. Departures from the normal temperature accompanying changes in the direction of the wind become fairly well marked, however, during the longer periods of northerly or southerly winds. The comparatively low temperatures experienced are most likely to occur during calm and clear nights, when the radiation from the ground is most active, while the high temperatures occur during periods

of sluggish air movement, accompanied by bright sunshine.

THE VELOCITY OF THE TRADES.

Wind velocity is quite as uniform in Porto Rico as wind direction. The average hourly velocity throughout the year is a little short of 11 miles. The entire range in average monthly velocities during the course of the year is between a minimum of 8 miles in October and a maximum of 13 miles in July, as shown in the following table:

Average monthly wind velocity.

	Miles per hour.
January	11
February	11
March	12
April	11
May	11
June	12
July	13
August	12
September	10
October	8
November	9
December	10
Year	11

The diurnal variation in the force of the wind is naturally a well-marked feature of the trades, as it is at all land stations; the average annual minimum velocity, 6 miles, at San Juan, occurs at sunrise, and the maximum, 16 miles, occurs at about 2 o'clock in the afternoon. These values are greatest during the month of July, 7 miles and 18 miles, respectively, and least in October, 5 miles and 13 miles, respectively. The remarkable uniformity in the wind movement is also shown by the figures expressing the average hourly velocities for successive years. The difference between the highest average for an entire year and the lowest average hourly velocity is but 1.6 miles, namely, 11.6 miles in 1906 and 10 miles in 1901 and 1902. The highest and lowest average hourly velocities for any one month during the past 11 years are shown in the following table:

	Jan.	Feb.	Mar.	Apr.	May.	June.
Highest	15	14	14	13	13	14
Lowest	9	9	10	9	9	11
Range	6	5	4	4	4	3

	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Year.
Highest	14	13	11	9	13	14	12
Lowest	11	10	8	6	7	8	10
Range	3	3	3	3	6	6	2

The east wind is the strongest throughout the year, and the southwest wind the lightest, considering average monthly values.

The relative force of the wind from the different points of the compass is shown in the following table in miles per hour:

Wind direction:	Wind force.
North	8
Northeast	13
East	14
Southeast	8
South	5
Southwest	4
West	5
Northwest	7

HIGH WINDS.

As cyclonic disturbances are not of frequent occurrence in the vicinity of Porto Rico, high winds are not as common here as in the domain of the United States. The period from November to June is practically free from the West Indian hurricanes, while comparatively few occur in July and October in the vicinity of Porto Rico; August is the month of greatest hurricane probability, but even during this month the island has been entirely within the storm area but three times during the past 40 years.

Moderately high winds frequently occur over portions of the island, however, during the passage of severe storms within a distance of 100 or more miles to the south or north. A tabulation of the highest velocities occurring within each month during the past 12 years shows the occurrence of a gale, a velocity of 40 or more miles per hour, on only 16 occasions, or an average of one in about 10 months. The wind attained a velocity of 50 miles on only five occasions during the same period. These velocities are based upon a maximum rate for a period of five minutes. The average monthly maximum velocity is 33 miles per hour. The highest wind velocity recorded at San Juan from November, 1898, to the close of 1910 is 72 miles per hour. This velocity was maintained for five minutes during the local storm of the character of a tornado which passed over the city on the 6th of September, 1910. The highest velocity recorded at San Juan during the hurricane of August 8, 1899, was 66 miles per hour; the recording instrument did not, at that time, have the same unobstructed exposure, otherwise a velocity of about 75 miles would doubtless have been recorded. The highest velocities have most frequently occurred with an east or northeast wind, although high southeast winds are of almost equal frequency. Of the 16 occasions on which the wind attained the velocity of a gale, 4 are credited to the month of August, 3 to September, 2 each to June, July, and October, and 1 each to January, March, and November. No gales have been recorded in the past 12 years in the months of February, April, May, and December.

THE DEPTH OF THE TRADE WINDS.

Judging from the movement of the clouds over San Juan, the average depth of the trade-wind current probably does not exceed 10,000 feet. The lower clouds, stratus, cumulus, and strato-cumulus, are wholly within the trade-wind drift. The bases of these clouds are generally below the level of the neighboring mountain summits, or under 3,000 feet. Excepting the well-developed cumulus clouds, whose heads frequently penetrate the intermediate layer of alto-stratus clouds, it is probably safe to state that the lower cloud belt is generally confined between the limits of 3,000 and 5,000 feet.

Tabulating the record of the 9 a. m. cloud observations at San Juan during the past 10 years, we find that the lower clouds moved from the east at 74 per cent of all observations, and from the southeast at 22 per cent, leaving but 4 per cent for all other directions.

The upper clouds, the cirrus forms, have an almost equally uniform movement from a westerly direction: 66 per cent from the west, 16 per cent from the southwest, and 9 per cent from the northwest, leaving but 9 per cent for all other directions.

The record of observations of the intermediate layer of clouds, the alto-cumulus and alto-stratus, shows a more uniform distribution between an easterly and a westerly

direction: From the northeast, 5 per cent; the east, 35 per cent; the southeast, 2 per cent; the southwest, 10 per cent; the west, 20 per cent; the northwest, 6 per cent; or 60 per cent from an easterly and 36 per cent from a westerly direction.

Very little difficulty is experienced by the observer in the classification of the lower and of the very high clouds. The personal equation of the observer plays an important part, however, in the classification of the clouds of the intermediate layer. In form and in texture the alto-cumulus and the alto-stratus often closely resemble some of the cirrus forms, especially in the early stages of development of the former. The elevation, however, of the alto-cumulus and alto-stratus does not entitle them to be classed as cirrus clouds, as they are probably in very many instances under an elevation of 10,000 or 12,000 feet. In the judgment of the writer a large percentage of the clouds recorded as cirro-cumulus and cirro-stratus really belong to the intermediate layer; if so, the percentage of westerly winds for this middle layer should be increased considerably. The personal impression, gained after two years' residence in Porto Rico, is that the prevailing direction of movement of the intermediate clouds is decidedly from the west and southwest.

THE SANITARY VALUE OF THE TRADES.

The value of the trade winds as an aid to navigation has been generally recognized for a very long time. As early as the fifteenth century navigators took advantage of the winds in the lower latitudes in their voyages to the West Indies.

The beneficent effect of a uniform and moderate wind movement upon the general health and the personal comfort of residents within the Tropics is not yet generally and sufficiently recognized by those living in extra-tropical regions. The uniformly high temperatures of the tropical belt, combined with a high humidity, have a decidedly debilitating and depressing effect in the absence of the modifying and stimulating effects of the trade winds or the daily recurring land and sea breeze.

The temperatures in Porto Rico are not excessively high, but the amount of moisture in the atmosphere, or the humidity, is quite high at all times. It is the presence of the steady, moderate flow of the trade winds which takes Porto Rico out of the class of areas in the Tropics to be avoided by the white man, and makes of it for more than half the year a very desirable place of residence for business as well as for pleasure.

During the brief periods of a few days, especially in the months of May, October, and November, when the trades decrease in strength, the effect of the more sluggish movement of the air is at once felt in increasing lassitude and a disinclination to exertion of any kind. As soon as a breeze springs up, however, the feeling of depression vanishes, even in the intense sunshine. Shade and a moderate breeze are sufficient to insure personal comfort in any season of the year in Porto Rico, so far as the usual atmospheric conditions are concerned. Exposure to the sun should be avoided as much as possible, especially by those not accustomed to residence in the Tropics; neglect of this necessary precaution is the cause of many disappointments to new arrivals.

In general healthfulness Porto Rico compares very favorably with the large cities of northern climates. During the past 10 years the annual mortality rate for the island as a whole has been about 23 per 1,000 inhabitants, practically the same as that of such cities as Boston, Philadelphia, Baltimore, and many other American and European cities. The island has been comparatively free from epidemics of any extent or degree of severity, a somewhat surprising fact in view of the very insanitary conditions which exist in some of the more congested centers of population. Few people realize the density of population in Porto Rico. With a total area of about 3,600 square miles, there are about 1,200,000 inhabitants, an average of over 300 to the square mile. In addition, there are few cities of any size; the population is mostly rural. San Juan, the largest city, with its suburbs, has a population of about 50,000, and covers an area of less than half a square mile.

The prevalent diseases of the island, excepting tuberculosis and the hookworm disease, are mostly intestinal disorders. In the language of one of the resident physicians the diseases of Porto Rico are those of the summer season in the temperate region, rather than the diseases peculiar to tropical countries. Eternal vigilance in the inspection of food and drink is the price of good health here as elsewhere in the Tropics. With the steady improvement in sanitary conditions, which has been a marked feature of the rapid development of Porto Rico, the dangers accompanying life in the Tropics are fortunately growing steadily less. The climatic conditions are favorable for good health, though there is lacking the bracing effects of the lower temperature and drier atmosphere of more northern countries.

While it is highly probable that the efficiency of the laboring classes in Porto Rico is distinctly below that of the same classes in more northern climates, the lower rating is without doubt largely due to the prevalence of the hookworm disease, to insufficient nutrition, a low rate of compensation, and the lack of modern methods of supervision; that is, to conditions under the control of man, rather than to climatic conditions.

THE TRADE WINDS AS A MOTIVE POWER.

The constant and remarkably uniform flow of the trade winds gives them an additional value in Porto Rico. The use of the windmill for furnishing power is gradually receiving proper recognition. The south side of the island is comparatively dry, and the rainfall is irregularly distributed through the year, necessitating extensive irrigation operations in order to carry on successfully the cultivation of sugar cane and other crops. On the north side the problem of drainage is almost equally important. In both of these operations the pump can be utilized to great advantage, owing to the presence of a constant wind as the motive power. Water is available in abundance on the south side coastal plain at depths varying from 50 to 100 feet, and the winds offer an inexhaustible source of power for pumping it to the surface. The windmill is also an economical engine for providing power on plantations for general purposes, where the use of steam may prove to be too expensive. When the availability of the trade winds as a source of power becomes more generally recognized, the windmill will be a much more familiar sight in Porto Rico than it is to-day.

THE EXPLANATION OF THE TRADE WINDS.

The development of the theory of the trade winds from the first scientific explanation read before the Royal Society of London in 1735 by George Hadley, to within comparatively recent years, forms a very interesting chapter in the history of the science of the weather.

The difference in the temperature of the atmosphere at the Equator and the zones to the north and south was recognized as the primary cause of the trades, and the revolution of the earth about its axis as the secondary cause. A clear understanding of the forces and conditions which

produce the northeast and southeast trades was, however, not worked out until a much later period; not until simultaneous observations of the barometer and wind direction and force became available, over a hundred years later, did it become possible to evolve a correct theory of the general circulation of the atmosphere, of which the trades form but a small part.

The general movements of the atmosphere and the causes which give rise to changes in wind direction and force are now fairly well understood. Over the North Atlantic there is a permanent area of high barometric pressure, or anticyclone, as it is technically called; in the equatorial zone the atmospheric pressure is permanently low; the flow of the atmosphere southward from the area of high pressure into the equatorial area of low pressure, in an endeavor to restore atmospheric equilibrium, constitutes the North Atlantic trade wind. The rotation of the earth from west to east deflects this wind from a north wind to a northeast, east, or a southeast wind, depending upon the locality with reference to the center of the North Atlantic area of high pressure. This area of high pressure, while permanently located in the North Atlantic, shifts its position within limited bounds from month to month and from year to year, causing the observed variations in the prevailing direction of the trades. At the same time there are variations in the gradient of pressure, or the difference in pressure, between the center and edges of the high area, causing variations in the velocity of the trades.

LAND AND SEA BREEZES.

Owing to the strength and persistence of the trade winds and the small extent of the coastal plain, the land and sea breezes are not a marked feature of the diurnal wind movement in Porto Rico. Their effects are, however, clearly seen in the prevailing direction of the wind on the north and south sides of the island. The resultant wind direction over Porto Rico, judging from the movement of the lower clouds, is from the east-southeast. The prevailing direction at San Juan is from the east during the day, and from the southeast during the night. These deviations, at the surface of the earth, from the true direction of the freely moving atmosphere above the island are in accord with the theory of the land and sea breeze. During the daytime there is a tendency along the north coast to blow from the relatively cooler ocean toward the warmer coastal plain; the result is a deflection of the east-southeast trade to an east wind. During the night the tendency is to blow from the relatively cooler land area toward the warmer ocean, resulting in a deflection of the trades from east-southeast to southeast.

On the south side the tendency to deflect the trade is reversed. There are no hourly observations available along the south coast, but the prevailing direction as recorded at practically all of the stations is from the southeast, based upon observations made during the day. It is probable that the prevailing direction during the night and early morning hours is from the east.

WEATHER, FORECASTS, AND WARNINGS FOR THE MONTH.

By EDWARD H. BOWIE, District Forecaster.

Unusual weather conditions during the month of May in the United States were the rule rather than the exception. The first week of the month was abnormally cool throughout the region east of the Rocky Mountains and warm over the Pacific slope; and frosts occurred at a number of points in the northern and central States from the western plains eastward. About the 10th of the month the above-referred-to temperature conditions were completely reversed and remained so until the close of the month; that is, the temperature was abnormally high and persistently so over practically all districts from the western plains to the Atlantic coast, and unseasonably low west of the Rocky Mountains. This condition was strikingly shown on a number of days when previous May records of heat were broken at points either in the Middle West or the Eastern States, and at the same time temperatures below the freezing point were recorded over the western Rocky Mountain Plateau. Also, it was not uncommon for the daily weather map to show warm-wave conditions in the Middle West at the time that snows were falling in the Rocky Mountains and the far Northwest.

While it is a recognized fact that warm waves in the Middle West and the Eastern States are closely related to a certain pressure distribution, namely, high barometric pressure over the middle latitudes of the Atlantic Ocean and low pressure in the Northwestern States and the interior of Alaska, it is seldom that this pressure distribution continues for a considerable length of time in the spring months. Usually it persists in May for short intervals of time only and the normal eastward movement of highs and lows along the northern border brings wide oscillations of temperature over much of the country. In the month under discussion there were few highs from the Northwest, and with two or three exceptions, hereinafter referred to, the lows were deflected far to the north of their normal course and the regions of intense heat did not come within the zone of the cyclonic winds. Moreover, when temperatures are persistently above the normal east of the Rocky Mountains it is usual for cool weather to prevail over the Pacific slope. The explanation is that the pressure being abnormally low over the Northwestern States there is necessarily a general flow of air from the high off the Pacific coast over this region and therefore low temperatures prevail. The international daily weather maps for the Northern Hemisphere for May show but minor oscillations in the so-called permanent highs over the middle latitudes of the Atlantic and Pacific Oceans, and for the greater part of the month the barometric readings reported from these regions were near or above the normal; also, the low over the Aleutian Islands and Alaska was deeper than normal but without marked pressure changes, and it did not give way until the last decade of the month. It is interesting to note that the cool weather of the first week of the month followed the building of an area of high barometric pressure over Alaska during the last decade in April, and that the general break in the intense heat in the Middle West and the Eastern States at the close of the month of May similarly followed an unusual increase in barometric pressure in that region. The so-called permanent low in the region of Iceland was absent from the 9th to the 20th and after the 26th; it was well defined from the 1st to the 8th and from the 21st to the 25th. Over the British Isles the barometer was low from the 1st to the 4th, 10th to 18th, and again on the 25th, well-defined depressions appearing on the 3d, 14th, and 25th; at other times during the month pressure readings were above the normal. Low pressure prevailed over southern and high pressure persisted the greater part of the month over northern Europe. There were strong variations in pressure over the interior of Asia the first half of the month; during the latter half the pressure oscillations in that region were unimportant though frequent.

On April 30 the following forecast for the first week in May was issued:

A cool wave now over the Northwest will move southeastward, reaching the Missouri, the lower Arkansas, and the upper Mississippi Valleys and the western upper Lake region on Monday; the Ohio Valley, the upper Lake and the lower Lake regions by Tuesday, and the Middle Atlantic States and New England about the middle of the week. Temperatures will reach the freezing point by Monday morning over the central Rocky Mountain region and the Northwest, and will be near freezing in Kansas, the Missouri and extreme upper Mississippi Valleys, and the western upper Lake region.

During the first half of the week the weather will be unsettled and showery over the eastern portion of the country, followed by a return to more settled conditions during the second half. In the great central valleys and the upper Lake region rains Monday and Tuesday; probably some snow over the northern districts; will be followed by clearing weather by the middle of the week and a return to more seasonable conditions. In the Plains States the weather will be generally fair after Monday, and the temperatures will begin to rise after Tuesday with the approach of a barometric depression from the Canadian Northwest. In the South the weather will continue more or less unsettled with occasional showers.

A barometric depression of marked intensity was central at 8 a. m. of the 1st over Lake Michigan, whence it moved rapidly east-northeastward and reached the Canadian maritime Provinces the night of the 2d. This disturbance caused shifting gales and rain and snow in the region of the Great Lakes and the Upper Mississippi and Missouri Valleys and strong westerly winds on the Atlantic coast from Cape Hatteras to Cape Cod. Storm warnings were displayed well in advance of the occurrence of these winds, and so far as is known there were no wrecks of vessels in the zone of high winds. At Green Bay, Wis., the wind reached a velocity of 68 miles an hour and winds of lesser violence were recorded at a number of points on the Great Lakes on the 1st and 2d, while the highest velocity reported from the Atlantic coast was 48 miles an hour at New York on the 2d. This disturbance caused numerous thunderstorms in the eastern half of the country and it was followed by unseasonably cool weather, frosts occurring the first several days of the month over nearly all northern and central States from the Plains States to the Middle Atlantic and New England coasts. Warnings of these frosts were issued well in advance of their occurrence.

On the 2d the pressure fell rapidly along the North Pacific coast, and a well-defined depression appeared in that region on the night of the 2d, causing brisk and high winds, and rains in Washington, Oregon, and Idaho. Storm warnings were displayed on the North Pacific coast the morning of the 2d. This disturbance rapidly lost intensity while crossing the Rocky Mountains.

The weekly forecast of Sunday, the 7th, read as follows:

The general pressure distribution over the Northern Hemisphere is such as to indicate that the coming week will be one of seasonably high temperatures in practically all districts east of the Rocky Mountains and relatively low temperatures over the western Plateau region and the Pacific States. There are no indications of a general storm to cross the country during the coming week, and the rainfall of the next

several days will be light and local and confined principally to the Middle West and the North Pacific States.

During this week the temperature averaged much above the normal in the region east of the Rocky Mountains and considerably below the normal over the Pacific States and the western Plateau. A disturbance of moderate intensity moved to the upper Missouri Valley on the 9th from the Canadian northwest, and passed thence northeastward across the Great Lakes on the 11th and down the St. Lawrence Valley on the 13th; it was attended by scattered thunder showers and moderately high winds on the Great Lakes, warnings of which were displayed 12 hours or more in advance of their occurrence. This depression was preceded by high temperatures for the season throughout the Middle West and the Eastern States, and at a number of points new records of high temperature for the season were established.

The weekly forecast of Sunday, the 14th, follows:

The indications are that the coming week will give temperatures averaging near or slightly below the normal in Northern and Central States east of the Rocky Mountains and in the North Pacific States. Relatively high temperatures will prevail in the Southern States and on the southern Pacific slope. The week will be one of generally fair weather west of the Rocky Mountains and in the Southwest. A disturbance that now covers the Rocky Mountains and the western Plateau will advance slowly eastward, preceded by rising temperature, unsettled weather, and fairly well-distributed rainfall; it will cross the Middle West Tuesday or Wednesday and reach the Atlantic States Thursday or Friday; it will be followed by fair and cooler weather over the Central and Northern States east of the Rocky Mountains.

The weather conditions during the week covered in the forecast immediately preceding were as forecast, with the exception that the warm-weather forecast for the Southern States also prevailed in the Lake region, the upper Mississippi Valley, and the Northeastern States. The precipitation attending the disturbance referred to afforded much needed relief from droughty conditions over the Middle West and the Southern States, except on the Atlantic coast. Frosts and local snows occurred the latter part of the week in the northern Rocky Mountain and Plateau regions.

A marked depression appeared off the north Pacific coast on the 17th and caused high winds; it passed inland and lost intensity while crossing the Rocky Mountains.

This disturbance was of unusual intensity for the season along the coast, a wind velocity of 76 miles an hour occurring at North Head, Wash., on the 17th.

With reference to the storm warnings issued in advance of the occurrence of these winds, the Journal (Portland, Oreg.) of the 18th remarked:

Exceptionally good work was done by the local Weather Bureau, and they had storm warnings up at 7.30 o'clock in the morning of the 17th, although the full force of the blow, which came suddenly, was not felt until late in the afternoon. But for the timeliness of the warnings it is said that shipping would probably have suffered because of the fact that a storm of that character is of such unusual occurrence so late in the season.

The weekly forecast of Sunday, the 21st, follows:

A barometric depression that is now over the Mississippi Valley will advance slowly eastward, attended by unsettled weather and showers Monday in the region east of the Mississippi River and on Tuesday and probably Wednesday in the Eastern States. Aside from the precipitation caused by this disturbance, the week will be one of generally fair weather. Cooler weather will overspread the Eastern States during the first part of the week, and will be followed by a period of moderate temperatures. Moderate temperatures will continue throughout the week in the Middle West and the Southern States, while relatively high temperatures are indicated for the next several days west of the Rocky Mountains.

The barometric depression referred to in this forecast moved eastward as stated and caused showers in the Ohio and Mississippi Valleys, the Lake region, and the middle Gulf States Monday, and the Eastern States on the 24th and the 25th. Beginning on the 23d, there were light local rains and snows in the Rocky Mountains and Plateau region, and later rains fell in the middle Plains States, being heavy in Kansas, Oklahoma, and northwest Texas. A change to cooler weather overspread the Eastern States on the 23d and 24th, while over the Middle West moderate temperatures were succeeded by a period of abnormally high temperatures on the 25th to 28th, when the maximum readings exceeded or equaled previously recorded high temperatures in the latter half of May at many stations in the Mississippi Valley. During the period of intense heat in the central valleys, unusually cold weather for the season prevailed over the region west of the Rocky Mountains; frost and freezing temperature occurring over large areas in the Plateau region. This area of cool weather advanced eastward and overspread nearly all districts east of the Rocky Mountains at the close of the week.

The forecast for the week beginning May 29 follows:

The general distribution of barometric pressure over the North American Continent and the adjacent oceans is such as to indicate that the coming week will be one of moderate temperature throughout the country, preceded, however, in the Eastern States by moderately high temperatures Monday and Tuesday. Conditions are favorable for unsettled weather and showers the first part of the week in the Gulf States, the lower Ohio and middle Mississippi Valleys, and the middle Plains States, and it is probable that this area of unsettled weather and showers will advance northward and eastward over the upper Mississippi Valley, the Lake region, and the Eastern States during the latter part of the week. Generally fair weather is indicated for the region west of the Rocky Mountains during the coming week.

The weather during the remaining days in May occurred as forecast on the 28th instant. A disturbance appeared in the Northwest on the 28th, crossed the northern Plains States on the 30th, the Great Lakes on the 31st, and thence moved down the St. Lawrence Valley. It gave general precipitation the first part of the week in the middle West and the latter part in the Eastern States; it was attended by numerous severe thunderstorms from the Mississippi Valley to the Atlantic coast. On the morning of the 31st warnings of severe local squalls were issued for the lower Lakes. On the afternoon of this day severe wind squalls caused the loss of several lives on Lake Erie. The wind reached a velocity of 60 miles an hour at Cleveland, Ohio. This disturbance was followed by moderate temperatures throughout the country, except in the west Gulf States, where intensely warm weather prevailed until the close of the month.

Average temperature and departure from the normal, May, 1911.

Districts.	Number of stations.	Average temperatures for the current month.	Departures, current month.	Accumulated since Jan. 1.	Average since Jan. 1.
New England	12	58.7	+4.2	+ 1.9	+0.4
Middle Atlantic	15	66.2	+4.7	+ 4.9	+1.0
South Atlantic	10	70.9	+1.1	+ 9.0	+1.8
Florida Peninsula *	7	75.0	− .9	+10.6	+2.1
East Gulf	11	73.7	+1.4	+17.7	+3.5
West Gulf	10	72.9	+ .3	+18.7	+3.7
Ohio Valley and Tennessee	13	69.8	+4.5	+14.5	+2.9
Lower Lakes	10	63.5	+6.3	+10.9	+2.2
Upper Lakes	12	57.6	+5.4	+17.3	+5.5
North Dakota *	9	55.1	+1.6	+ 4.4	+ .9
Upper Mississippi Valley	14	67.3	+5.4	+18.3	+3.7
Missouri Valley	12	65.2	+3.2	+20.8	+4.2
Northern slope	9	52.8	− .2	+ 6.6	+1.3
Middle slope	6	64.9	+2.0	+17.8	+3.6
Southern slope *	8	70.9	+1.4	+18.0	+3.6
Southern Plateau *	10	65.0	−1.8	+ 3.6	+ .7
Middle Plateau *	10	54.0	−1.2	+ 5.1	+1.0
Northern Plateau *	11	51.8	−3.2	− 2.7	− .5
North Pacific	7	50.9	−2.3	− 7.1	−1.4
Middle Pacific	5	56.9	−2.6	− 5.4	−1.1
South Pacific	4	60.1	−1.6	+ .5	+ .1

Regular Weather Bureau and selected cooperative stations.

Average precipitation and departure from the normal, May, 1911.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
New England	11	1.04	31	−2.3	− 4.3
Middle Atlantic	15	1.42	40	−2.1	− 6.2
South Atlantic	11	1.17	31	−2.6	−10.7
Florida Peninsula*	7	4.06	128	+ .9	− 6.1
East Gulf	11	2.69	77	− .8	− 4.3
West Gulf	10	1.56	38	−2.6	− 3.6
Ohio Valley and Tennessee	13	1.34	37	−2.3	− 2.3
Lower Lakes	10	2.00	65	−1.1	− 1.5
Upper Lakes	12	3.87	115	+ .5	− .7
North Dakota*	9	3.08	125	+ .6	+ .5
Upper Mississippi Valley	15	2.47	59	−1.7	− 2.8
Missouri Valley	12	1.90	45	−2.3	− 2.4
Northern slope	9	1.21	52	−1.1	− 1.8
Middle slope	6	2.54	68	−1.2	− 2.0
Southern slope*	8	2.51	57	−1.9	− 1.3
Southern Plateau*	10	.15	33	− .3	+ .7
Middle Plateau*	11	.38	32	− .8	− .1
Northern Plateau*	11	2.02	111	+ .2	− 2.1
North Pacific	7	3.38	131	+ .8	+ 8.9
Middle Pacific	7	.87	69	− .4	+ 3.7
South Pacific	4	.08	14	− .5	− 7.4

* Regular Weather Bureau and selected cooperative stations.

Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	73	−5	Missouri Valley	61	−4
Middle Atlantic	66	−6	Northern slope	62	+4
South Atlantic	70	−4	Middle slope	56	−5
Florida Peninsula	76	0	Southern slope	59	−2
East Gulf	65	−6	Southern Plateau	32	0
West Gulf	66	−9	Middle Plateau	41	−5
Ohio Valley and Tennessee	60	−8	Northern Plateau	57	+1
Lower Lakes	64	−8	North Pacific	78	+2
Upper Lakes	69	−3	Middle Pacific	70	−1
North Dakota	66	+4	South Pacific	68	−1
Upper Mississippi Valley	60	−8			

Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	5.1	−0.4	Missouri Valley	4.5	−0.6
Middle Atlantic	4.0	−1.0	Northern slope	5.4	− .1
South Atlantic	3.8	− .7	Middle slope	4.9	.0
Florida Peninsula	4.2	− .2	Southern slope	4.6	+ .2
East Gulf	3.3	−1.4	Southern Plateau	2.2	− .5
West Gulf	3.6	−1.2	Middle Plateau	4.5	+ .4
Ohio Valley and Tennessee	3.5	−1.5	Northern Plateau	6.0	+ .9
Lower Lakes	3.7	−1.7	North Pacific	6.9	+ .6
Upper Lakes	5.0	− .5	Middle Pacific	4.3	+ .3
North Dakota	5.1	− .4	South Pacific	3.6	+ .5
Upper Mississippi Valley	4.4	− .9			

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Buffalo, N. Y.	1	56	sw.	North Head, Wash.	2	54	se.
Canton, N. Y.	2	54	sw.	Do.	3	76	se.
Cleveland, Ohio	31	60	nw.	Do.	4	64	se.
Columbus, Ohio	1	52	w.	Do.	17	78	se.
Detroit, Mich.	1	56	w.	Pittsburg, Pa.	31	57	nw.
Duluth, Minn.	11	54	sw.	Point Reyes Light, Cal.	4	51	nw.
Fort Smith, Ark.	20	52	nw.	Do.	6	53	nw.
Green Bay, Wis.	1	68	n.	Do.	8	53	nw.
Helena, Mont.	6	58	sw.	Do.	9	53	nw.
Lewiston, Idaho	5	54	w.	Do.	11	50	nw.
Marquette, Mich.	18	50	s.	Do.	12	80	nw.
Modena, Utah	5	52	sw.	Do.	13	70	nw.
Do.	23	52	sw.	Do.	14	61	nw.
Mount Tamalpais, Cal.	5	52	nw.	Do.	15	50	nw.
Do.	6	50	nw.	Do.	18	63	nw.
Do.	8	56	nw.	Do.	23	53	nw.
Do.	9	72	nw.	Do.	24	65	nw.
Do.	12	78	nw.	Do.	25	64	nw.
Do.	13	65	nw.	Do.	26	54	nw.
Do.	23	54	w.	S. E. Farallon, Cal.	13	51	nw.
Do.	24	60	nw.	Tatoosh Island, Wash	2	52	s.
Do.	25	61	nw.	Do.	3	68	s.
Mount Weather, Va.	2	56	nw.	Do.	4	52	s.
New York, N. Y.	2	55	nw.	Toledo, Ohio	1	56	sw.
Do.	3	50	nw.				

RIVERS AND FLOODS, MAY, 1911.

By H. C. FRANKENFIELD, Professor of Meteorology.

At the end of April, 1911, the lower Mississippi River was in flood, with the crest a short distance above Arkansas City, Ark. On May 2 and 3 the crest passed this place with a stage of 48 feet, 1 foot above the flood stage, and crest stages below were as follows: Greenville, Miss., 41.6 feet, 0.4 foot below the flood stage, on May 3 and 4; Vicksburg, Miss., 44.8 feet, 0.2 foot below the flood stage, on May 5–8; Natchez, Miss., 44.3 feet, 1.7 feet below the flood stage, on May 8–12; Baton Rouge, La., 32.5 feet, 2.5 feet below the flood stage, on May 12–15; Donaldsonville, La., 25.4 feet, 2.6 feet below the flood stage, on May 12 and 13; and New Orleans, La., 16 feet, 2 feet below the flood stage, on May 16. The river was above the flood stage at New Madrid, Mo., for 12 days, at Memphis, Tenn., for 14 days, at Helena, Ark., for 12 days, and at Arkansas City, Ark., for 9 days. Warnings were issued whenever necessary, and the flood caused practically no damage, except that occasioned by the slight delay in spring planting.

The flood in the Yazoo River was more severe, and at Swan Lake, Miss., the river was above the flood stage of 24 feet for 33 days, with a crest stage of 29.9 feet, or 5.9 feet above the flood stage, on April 25–27. This stage was 0.6 foot higher than the previous high-water record of December 2, 1906. At Greenwood, Miss., the crest stage was 36.5 feet, 1.5 feet below the flood stage, on May 2, and at Yazoo City, Miss., 25.1 feet, 0.1 foot above the flood stage, on May 12–18. Warnings for this flood were first issued on April 17. Some lands were overflowed and planting delayed, but on the other hand the flood was of immense importance to the lumber interests, as millions of feet of lumber were rafted to the mills. In the year 1910 it was necessary to haul the logs to the water, a very expensive process.

Losses were as follows:

Property, excluding crops	$5,000
Crops	30,000
Erosion	None.
Suspension of business	30,000
Total	65,000

Value of property saved through Weather Bureau warnings about $15,000.

Heavy rains on April 30 over the watershed of the upper Cumberland River caused a rise at Burnside, Ky., of 41.9 feet in 24 hours, to a stage of 50.3 feet, 0.3 foot above the flood stage. The high stage was of short duration, and, although there were decided rises below, flood stages were not reached, as the excessive rainfall was confined to the headwaters only. Very little damage was done.

Stages in the Missouri and Ohio Rivers were moderate, while in the upper Mississippi River they continued low. Low stages were also the rule in the rivers of the Atlantic systems.

The annual rise of the Columbia River was not marked by any unusual occurrence, and the stages were somewhat lower than usual.

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville, on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

SPECIAL PAPERS ON GENERAL METEOROLOGY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following have been selected from among the titles of books recently received as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Anonymous publications are indicated by a ——.

British East Africa. Agricultural department.
Meteorological records. 4th Annual report, 1907. Nairobi. 1908. 8°.
Meteorological records. 5th Annual report, 1908. Nairobi. 1909. 8°.

Callendar, H. L.
The radio-balance. A thermoelectric balance for the absolute measurement of radiation, with application to radium and its emanation. [London] [1911?] 34p. 8°. (*Reprinted:* Proc., phys. soc. London, Dec. 15, 1910. v. **23.**)

Denmark. Meteorologiske institut.
Nautisk-meteorologiske aarbog, 1910. Kjøbenhavn. 1911. v. p. f°.

Drygalski, Eric von.
Das Schelfeis der Antarktis am Gaussberg. München. 1910. 44p. 8°. (*S.-A.:* Sitzber. k. bay. Akad. Wiss., Math.-Physik. Kl., 1910, Abhdl. 9.)
Die Vereisung von Meeresräumen, ihre Möglichkeiten, Entwicklung und Wirkung. Basel. 1910. 16p. 8°. (*S.-A.:* Vhdlgn. Schweiz. Naturf. Gesell., **93.** Jhrsversam., Sept. 1910, in Basel.)

Emden, Robert.
Grundlagen der Ballonführung. Leipzig, etc. 1910. 140p. 8°.

Eredia, Filippo.
I venti in Italia. Roma. 1909. vi, 150p. f°. (*Estratto:* Riv. tecn. di aeron. e Boll. soc. aeron. Italiana, 1907, 1908, 1909.)

Fuller, Myron L[eslie].
Freezing of wells and related phenomena. p. 23–31. 8°. (*In* U. S. Geol. surv. Water-supply paper no. **258.** Washington. 1911. 123p. 8°.) [Author discusses "blowing," "breathing," and "sucking" wells.]

Héjas, Endre.
Die geographische Verteilung der Gewitter in Ungarn. [n. p.] [n. d.] p. 296–309. 8°. (*S.-A.:* Földrajzi Közlemények. Bd. **37,** Hft. 8–9–10.)

Hugershoff.
Die periodischen Fehler barometrische bestimmter Höhenunterschiede in der inneren Tropenzone. Dresden. 1910. 59p. 8°. (*S.-A.:* Mitteil. Ver. f. Erdkunde, Dresden.)

Jefferson, Mark [Sylvester William].
Teachers' geography—Man and climate, with practical exercises. 3d. ed. Ypsilanti, Mich. 1911. 79 p. 4°.

Krebs, Wilhelm.
Geophysikalische, besonders klimatische Beziehungen des Auftretens der Heringsschwärme in der südöstlichen Nordsee. [Reprinted from: "Der Fischerbote," Hamburg, Mai 1911.]

Láska, V.
Über die Abnahme des Luftdruckes mit der Höhe. Prag. 1910. 9p. 8°. (*S.-A.:* Sitzungsber. k. böhm. Gesell. Wiss., II. Kl., 1910.)

Mascart, Jean.
Le tremblement de terre en Bretagne (5 août 1909). Torino. 1910. 17 p. 8°. (*Estratto:* Riv. astron. e sci. affini. Anno 4, Marzo, 1910.)

Mexico. Instituto geológico.
Catálogo de los temblores (macroseismos) sentidos en la República Mexicana y microseismos registrados en la Estación seismológica central, Tacubaya, D. F., durante el 2° semestre de 1909 . . . Mexico. 1911. p. 435–496. 8°. (Parergones. Tomo **3,** No. 8.)

Mohn, H[enryk].
Nedbør i Norge. [n. p.] [1911] p. 114–135. 8°. (Saertryk av "Naturen," Marts–April 1911.)

Norway. Meteorologiske institut.
Aarsberetning for 1908–1909. [Kristiania]. 1911. 4 p. 12°.
Jahrbuch . . . 1910. Christiania. 1911. xii, 122 p. f°.
Nedbøriagtagelser i Norge . . . 1910. Christiania. [1911]. v. p. f°.
Oversigt over luftens temperatur og nedbøren i Norge, 1909. Kristiania. [1911.] 21 p. 8°.

Philippines. Weather bureau.
Report of the director . . . 1908. Manila. 1910. 176 p. 4°.

São Paulo (Brazil). Secção meteorologica.
Dados climatologicos . . . 1909. São Paulo. 1910. v. p. 8°.

Sonnblick-Verein.
Jahres-Bericht, 1910. Wien. 1911. 43 p. 4°.

Sweden. Hydrografiska byrån.
Årsbok, 1908 & 1909. Stockholm. 1911. v. p. f°.

Switzerland. Abteilung für Landeshydrographie.
Graphische Darstellungen der schweizerischen hydrometrischen Beobachtungen und der Luft-Temperaturen und Niederschlags-Höhen für das Jahr 1908. [Bern]. 1909. 8 p., charts. f°.
Graphische Darstellungen . . . für das Jahr 1909. [Bern]. 1910. 8p., 53 charts. f°.

U. S. Department of agriculture.
Yearbook . . . 1910. Washington. 1911. 711 p. 8°.

U. S. Weather bureau.
Report of the chief . . . 1909–10. Washington. 1911. 281 p. 4°.

Vialay, Alfred.
Contribution à l'étude des relations existant entre les circulations atmosphériques, l'électricité atmosphérique et le magnétisme terrestre. Paris. 1911. viii, 205 p. 8°.

Walter, B.
Ueber Doppelaufnahmen von Blitzen mit einer stehenden und einer bewegten photographischen Kamera. Hamburg. 1910. 38 p. 5 pl. 8°. (*S.-A.:* Jahrb. Hamburg. Wiss. Anstalten, **27,** 1909.)

Wells, Edward L.
Cooperation in frost prevention. An address . . . at Boise . . . Jan. 24, 1911. Portland, Oreg. 1911. 9 p. 8°.

Wood, Robert W[illiams].
Physical optics. New, revised edition. New York. 1911. xvi, 705 p. 8°.

Wundt, Walter.
Niederschlag und Abfluss, speciell im oberen Neckargebiet. [n. p.] [1910]. p. 144–163. 2 pl. 8°. (*S.-A.:* Jahreshft. Ver. vaterl. Naturk. Württemberg. Jhg. **66,** 1910.)

RECENT PAPERS BEARING ON METEOROLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a ——.

American geographical society. Bulletin. New York. v. 43. June, 1911.
Ward, Robert DeC. The economic climatology of the coffee district of São Paulo, Brazil. p. 428–446.

Franklin institute. Journal. Philadelphia. v. 171. June, 1911.
Steinmetz, Charles Proteus. Some unexplored fields in electrical engineering. p. 537–559. [Discusses lightning. p. 540–544.]

Great Britain. Meteorological office. Monthly meteorological chart of the Indian ocean. London. June, 1911.
—— Icebergs of the southern hemisphere. [Statistics for the years 1885–1910.]
—— Corposants, or St. Elmo's fires.

Leslie's illustrated weekly. New York. June 22, 1911.
Quimby, Harriet. Exploring air lanes. p. 703; 715. [Illustrated.]

Royal astronomical society of Canada. Journal. Toronto. v. 5. March–April, 1911.
Craig, Consuelo. Audibility of the aurora. p. 154–155.

Royal meteorological society. Quarterly journal. London. v. 37. April, 1911.
Gold, E. Note on a difficulty in connection with the general circulation and the advective region (stratosphere). p. 186–187.

Royal society of London. Proceedings. London. Series A. v. 85. No. A 578.
Hartley, W. N. On some mineral constituents of a dusty atmosphere. p. 271–275.

Scientific American. New York. v. 104. 1911.
—— Waterspouts. Facts and fictions concerning them. p. 564; 577–578. (June 10.) [Illustrated.]
Talman, C. Fitzhugh. Hygroscopes—quaint and curious. p. 599; 610. (June 17.) [Illustrated.]
—— Audibility of the aurora. p. 621. (June 24.)
—— The design of lightning conductors and the fundamental principles involved therein. p. 623. (June 24.) [Abstract of discussion by Slaby.]

Symons's meteorological magazine. London. v. 46. May, 1911.
Sedgwick, Walter. Weather in the seventeenth century. p. 61–66.

U. S. Department of agriculture. Yearbook, 1910. Washington. 1911.
Cooke, Wells W. The migratory movements of birds in relation to the weather. p. 379–390.
Bigelow, Frank H. Mountain snowfall observations and evaporation investigations in the United States. p. 407–412.

Aérophile. Paris. 19 année. 1 juin 1911.
Coanda, H. Etude de la résistance de l'air par la chronophotographie. p. 253–256.

Astronomie. Paris. 25 année. Janvier 1911.
Baldet, Fernand. Les feux Saint-Elme au Pic du Midi. p. 22–23.

Ciel et terre. Bruxelles. 32 année. Juin 1911.
L., E. Les méthodes d'enregistrement des phénomènes météorologiques par la photographie. p. 186–191.

Cosmos. Paris. 60 année. 1911.
Gabriel, —. Prévision du temps. Une série d'applications de la méthode Guilbert. p. 520–526. (13 mai.)
—— La foudre cylindrique. p. 561–562. (27 mai.)
Esteban, Hermano José. Les pluies fossiles. p. 617–618. (10 juin).
—— L'atmosphère d'hydrogène de la terre. p. 621. (10 juin.)

Géographie. Paris. Tome 23. 15 février 1911.
Clouzot, Etienne. Les inondations à Paris du vi^e^ au xx^e^ siècle. p. 81–100. [With list of inundations at Paris before 1650.]

Journal de physique. Paris. 5 sér. Tome 1. Mai 1911.
Turpain, A. Curieux effets d'un coup de foudre sur une antenne réceptrice d'ondes électriques. p. 372–381.

Nature. Paris. 39 année. 27 mai 1911.
Loisel, J. Cycles solaires et météorologiques. p. 418–422. [Illustrated.]

Radium. Paris. Tome 8. Mai 1911.
Chauveau, A. B. Sur les mesures récentes du courant vertical de conductibilité entre l'atmosphère et le sol. p. 187–196.

Geographische Zeitschrift. Leipzig. 17. Jahrgang. 5. Heft. 1911.
Knörzer, Albert. Die Temperaturverhältnisse der schwäbisch-bayerischen Hochebene und des Alpenvorlandes. p. 260–269.

Gesellschaft für Erdkunde. Zeitschrift. Berlin. No. 5. 1911.
Reinhard, A. v. Zur Lage der Schneegrenze im Kaukasus. p. 326–330.

Meteorologische Zeitschrift. Braunschweig. Band 28. Mai 1911.
Maurer, Jul[ius]. Aus 25jährigen Aufzeichnungen der Sonnenscheindauer in der Schweiz. p. 193–200.
Wegener, Alfred. Über den Ursprung der Tromben. p. 201–209.
Bemmelen, W. van. Bericht über die Registrierballonaufstiege in Batavia. p. 209–213.
Hellmann, Gustav. Der Schwankungsquotient der jährlichen Niederschlagsmengen. p. 214–215.
Siegel, Franz. Gewitterverhältnisse von Curityba, nach 23— bzw. 20jährigen Beobachtungen, 1886 bis 1908. p. 216–220.
Siegel, Franz. Platzregen in Curityba. p. 220.
Siegel, Franz. Der jährliche Gang der Temperatur zu Curityba. p. 221.
Wagner, A. Registrierballonaufstiege auf der Adria im Mai 1910. p. 222–225.
Gockel, Albert. Luftelektrische Messungen auf der Adria und dem Mittelmeere. p. 225–227.
Wagner, A. Die italienische aerologische Expedition nach Sansibar 1908. p. 227–228.

Meteorologische Zeitschrift—Continued.
—— Meteorologische Beobachtungen zu Chan-Heou (China) in Jahre 1909. p. 231–232.
—— Meteorologische Beobachtungen am Observatorium von Ho-k'ieou (China) im Jahre 1909. p. 231.
—— Klima von Marrakesch, Marokko. p. 234–235.

Sonnblick-Verein. Jahresbericht. Wien. 19. Jahrgang. 1910.
Die Observatorien des Monte Rosa-Gebietes in Beziehung zum meteorologischen Dienste. p. 13–16.

Wetter. Berlin. 28. Jahrgang. 1911.
König, Willi. Der milde Winter 1910/11. p. 73–80. (April.)
Weyde, Franz. Die Abhängigkeit des Grundwasserstandes von dem Luftdrucke. p. 81–84; 108–111. (April, Mai.)
Kassner, C. Eine Regenbeobachtung auf der Eisenbahn. p. 87–89. (April.) [Speed of falling raindrop determined by its trace on window-pane of a moving train.]
Trabert, W[ilhelm]. Die Zugrichtung der Depressionen. p. 97–98.
Peppler, Wilhelm. Zur Kenntnis der Zyklonen und Antizyklonen 2. Mitt. p. 98–108. (Mai.)
Freybe, O[tto]. Die Treffsicherheit der Prognosen. p. 117–120. (Mai.)

Nuovo cimento. Pisa. Ser. 6. v. 1. Febbraio 1911.
Accolla, A. Dispersione elettrica e potenziale dell' atmosfera in Tunisi durante il passaggio della cometa di Halley. p. 132–138.

SPECIAL NOTICE.

The United States Weather Bureau is forming in its library, at Washington, a collection of meteorological photographs, and will welcome additions thereto from all parts of the world. The following classes of pictures are among those desired:

1. Views of meteorological offices, observatories, and stations.
2. Pictures of meteorological apparatus.
3. Portraits of meteorologists; views of their homes and birthplaces.
4. Views showing the effects of storms, inundations, freezes, heavy snowfall, etc.
5. Cloud photographs.
6. Photographs of optical phenomena (rainbows, halos, Brocken specter, mirage, etc.).
7. Photographs of lightning and its effects.
8. Photographs of meteorologically interesting pictures in old books, or of early prints and paintings. (E. g., contemporary pictures of the damage wrought by the Great Storm of 1703, in England.)

Persons who are willing to present such pictures to the Weather Bureau, or who will furnish them in exchange for Weather Bureau publications, are requested to address: Chief, U. S. Weather Bureau (Library), Washington, D. C.

It will add much to the value of these pictures if the sender will kindly note on the back of each as much pertinent information as practicable. On pictures of classes 4–7, inclusive, should be stated at least the date, hour, and place at which each picture was taken, and the direction toward which the camera was pointed.

WASHINGTON, *June, 1911.*

CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given, for the various sections of the Climatological Service of the Weather Bureau, the average temperature and rainfall, the stations reporting the highest and lowest temperatures with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperatures for each section, the highest and lowest temperatures, the average precipitation, the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperature and precipitation are based only on records from stations that have ten or more years of observations. Of course the number of such records is smaller than the total number of stations.

Temperature and precipitation by sections, May, 1911.

Sections.	Temperature (°F.).							Precipitation (inches and hundredths).					
	Section average.	Departure from the normal.	Monthly extremes.					Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.	Station.	Lowest. Date.			Station.	Amount.	Station.	Amount.
Alabama	72.9	+1.7	Thomasville	102	28	Riverton	35 6	2.85	−1.31	Wetumpka	5.78	Uniontown	0.90
Arizona	67.2	−1.1	Gilabend	109	23	Flagstaff (2)	15 11	0.02	−0.24	Kingman	0.31	55 stations	0.00
Arkansas	70.8	+1.0	Jonesboro	101	28	Bergman	26 2	1.11	−4.28	Arkadelphia	2.08	Marked Tree	0.22
California	58.3	−3.2	Heber	104	22	Tamarack	11 4	0.72	−0.62	Weitchpec	6.78	41 stations	0.00
Colorado	52.8	+1.7	Lamar	99	8†	Silverton (near)	9 8	0.83	−1.13	Vilas	3.18	Cedaredge	0.00
Florida	74.8	−1.0	2 stations	100	27	2 stations	43 8†	4.43	+0.79	Miami	12.12	Switzerland	0.90
Georgia	73.1	+1.2	Waynesboro	103	28†	Clayton	36 7	2.14	−1.33	Quitman	4.92	Savannah	0.13
Hawaii (April)	70.0	.....	3 stations	87	9†	Humuula	41 10†	6.55	.....	Hakalan	33.74	Waialua Mill	0.17
Idaho	50.7	−2.4	3 stations	92	4‖	Landore	18 6	2.44	+0.15	Orofino	6.20	Forney	0.18
Illinois	68.1	+5.6	2 stations	101	28	Lanark	24 2	1.93	−2.19	Martinton	5.79	Cairo	0.22
Indiana	67.7	+5.3	Rome	103	28	Judyville	27 5	2.34	−1.62	Vevay	4.97	Terre Haute	0.46
Iowa	64.9	+4.8	2 stations	98	25†	Decorah	23 3	3.76	−0.74	Fayette	8.73	Keokuk	0.42
Kansas	66.8	+2.8	Russell	102	18	Russell	24 2	2.72	−1.39	Wellington	6.98	Natoma	0.14
Kentucky	69.4	+3.7	Earlington	105	28	3 stations	29 2†	2.46	−1.48	Owensboro	5.50	Pikeville	0.48
Louisiana	74.4	+0.4	Abbeville	105	30	Tallulah	40 5	2.82	−1.48	Donaldsonville	7.43	St. Francisville	T.
Maryland & Delaware	67.6	+4.9	Keedysville	100	19	Deer Park	19 5	1.05	−2.69	Baltimore	3.45	Chestertown	T.
Michigan	59.7	+6.1	4 stations	99	27	Thomaston	13 2	3.71	+0.42	Hart	11.61	Charlotte	0.68
Minnesota	59.8	+5.5	Montevideo	97	18	Warroad	14 2	3.48	−0.16	Grand Meadow	6.57	Milan	1.05
Mississippi	73.1	+1.1	Lake Como	104	29	Duck Hill	39 6	2.10	−2.16	Malone	6.69	Canton	0.07
Missouri	68.8	+4.4	Caruthersville	101	28	Bolivar	27 2	1.55	−3.51	St. Joseph	5.31	Eldorado Springs	0.13
Montana	50.1	−1.0	Fort Shaw	95	31	Bowen	11 1	2.92	−0.18	Half Moon Pass	11.75	Plains	0.73
Nebraska	61.2	+2.3	Cambridge	99	18†	Canton (near)	3 1	2.27	−1.29	Fullerton	7.33	Bridgeport	0.30
Nevada	50.6	−3.9	Logan	97	22	Potts	16 10	0.45	−0.49	Bishop	1.49	2 stations	0.00
New England	60.5	+5.0	Lewiston, Me	101	22	Benton, N. H	16 3	1.15	−2.40	Worcester, Mass	3.66	Bar Harbor, Me	T.
New Jersey	64.5	+4.3	Clayton	99	19	Layton	22 4	1.37	−2.59	Phillipsburg	3.84	Asbury Park	0.31
New Mexico	69.5	+0.5	Alamogordo	103	24	Elizabethtown	11 11†	1.32	+0.20	Valley	6.15	14 stations	0.00
New York	62.9	+6.5	Keene Valley	99	21	Nehasane	16 4	2.22	−1.37	Horseshoe	5.63	Chazy	0.40
North Carolina	69.1	+1.8	Ramseur	101	26	Banners Elk	26 3†	1.27	−2.92	Henderson	2.94	Elizabethtown	0.27
North Dakota	55.0	+2.8	Forman	99	14	Orange	6 1	2.88	+0.78	Larimore	7.54	Hettinger	0.43
Ohio	66.3	+5.5	2 stations	101	27	4 stations	25 5	1.69	−1.95	Garrettsville	3.04	Green	0.10
Oklahoma	71.3	+4.0	Waurika	103	19	Hurley	28 1	2.61	−3.80	Alva	7.20	Idabel	0.70
Oregon	51.2	−3.0	Umatilla	94	31	Cliff	13 25	3.46	+1.38	Trask	14.35	Big Basin	0.08
Pennsylvania	65.2	+5.8	2 stations	99	19	Pocono Lake	20 5	1.97	−1.96	Hamburg	6.81	Pittsburg	0.42
Porto Rico	76.7	−0.5	2 stations	97	8†	Cidra	51 5	10.15	+3.60	Cidra	23.85	Mayaguez	4.10
South Carolina	72.6	+1.0	Santuc	106	26	Camden	35 6	0.65	−2.99	Liberty	2.59	2 stations	0.00
South Dakota	69.3	+4.7	Forestburg	101	18	Daviston	9 1	1.70	−1.25	Aberdeen	4.23	Vale	0.04
Tennessee	70.0	+3.0	Jackson	102	27	Mountain City	29 3	1.82	−2.27	Florence	4.43	2 stations	0.20
Texas	73.2	+0.1	2 stations	105	31	Romero	29 1	2.13	−1.62	Matagorda	19.09	2 stations	0.00
Utah	55.0	−0.3	Iosepa	100	5†	Ibapah	12 26	0.52	−0.95	Logan	1.77	14 stations	0.00
Virginia	67.5	+3.7	Lincoln	102	22	2 stations	23 2†	1.01	−3.03	Hot Springs	2.40	Warsaw	0.29
Washington	52.7	−2.7	Kennewick	99	31	2 stations	25 1	3.33	+1.10	Yale	11.28	Kiona	0.48
West Virginia	66.0	+3.9	2 stations	100	20	3 stations	22 2†	1.46	−2.58	Moorefield	6.35	Franklin	0.03
Wisconsin	60.4	+5.5	2 stations	96	17†	Long Lake	9 2	4.65	+0.79	Valley Junction	8.10	Delavan	1.47
Wyoming	48.4	+0.8	Casper	97	30	Thumb, Y. N. P	6 7	1.35	−0.82	Woodrock	4.74	2 stations	T.

† Other dates also.

TABLE I.—*Climatological data for United States Weather Bureau stations, May, 1911.*

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.										Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.					Total.	Departure from normal.	Days with 0.01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
New England.							**58.7**	**+ 4.2**											**73**	**1.04**	**−2.3**								**5.1**		
Eastport	76	67	85	29.88	29.96	0.00	51.0	+ 4.1	76	13	60	28	4	42	35	47	43	79	0.13	− 3.7	5	7,286	s.	36	e.	22	9	11	11	6.2	T.	
Greenville	1,070	6	....	28.84	30.00	....	57.2	....	90	21	70	26	4	44	40	....	....	....	....	0.40	....	7	....	....	....	....	....	....	....	....	T.	....
Portland, Me.	103	81	117	29.90	30.02	+ .05	56.8	+ 3.3	91	22	66	27	4	47	38	49	42	62	1.37	− 2.3	9	7,106	s.	36	w.	12	14	6	11	5.1	T.	
Concord	288	70	79	29.71	30.02	+ .04	61.6	+ 5.9	98	22	76	26	5	48	46	....	....	....	....	1.57	− 1.7	8	4,181	se.	29	w.	12	13	11	7	4.7	T.	
Burlington	404	11	48	29.57	30.00	+ .03	62.5	+ 8.6	92	21	74	29	4	51	39	....	....	....	....	1.13	− 1.7	6	8,490	s.	38	s.	15	12	10	9	4.8	0.3	
Northfield	876	16	60	29.08	30.02	+ .05	58.5	+ 5.0	93	22	73	27	5	44	45	53	47	66	0.99	− 1.8	8	5,663	s.	29	n.	29	13	8	10	4.7	0.2	
Boston	125	115	188	29.90	30.03	+ .05	62.4	+ 5.8	92	22	72	33	4	53	31	55	50	69	0.35	− 3.2	5	7,539	sw.	34	nw.	2	11	8	12	5.5	....	
Nantucket	12	14	90	30.04	30.05	+ .06	54.4	+ 1.4	74	13	62	36	4	47	27	51	49	88	0.82	− 1.8	8	11,166	sw.	42	sw.	3	14	10	7	4.8	....	
Block Island	26	11	46	30.01	30.04	+ .05	55.3	+ 2.4	72	13	62	38	4	49	23	52	50	89	1.08	− 2.7	9	10,842	sw.	41	w.	3	12	7	12	5.6	....	
Narragansett	....	9	....	....	....	....	56.2	+ 1.5	79	10	65	28	4	48	34	....	....	....	1.68	....	7	....	sw.	....	....	....	18	2	11	....	....	
Providence	160	141	165	29.88	30.05	+ .07	60.8	+ 2.3	85	22	71	33	4	51	31	53	47	68	2.04	− 1.4	7	7,712	se.	38	w.	3	16	8	7	4.4	....	
Hartford	159	122	140	29.87	30.04	+ .06	63.2	+ 5.7	93	22	74	32	4	52	32	55	48	64	1.22	− 2.3	10	5,710	s.	27	w.	3	9	13	9	5.8	....	
New Haven	106	116	155	29.93	30.04	+ .05	61.4	+ 3.8	85	22	71	33	4	52	33	54	49	71	0.74	− 2.9	12	5,600	s.	31	w.	3	16	9	6	4.3	....	
Middle Atlantic States.							**66.2**	**+ 4.7**											**66**	**1.42**	**− 2.1**								**4.0**		
Albany	97	102	115	29.91	30.01	+ .03	65.5	+ 6.6	97	22	77	31	4	54	36	56	49	60	2.15	− 0.8	10	5,755	s.	28	s.	1	15	13	3	3.8	T.	
Binghamton	871	78	88	29.13	30.05	+ .07	63.6	+ 6.6	94	22	76	27	4	51	42	....	....	....	1.94	− 1.2	10	3,737	e.	22	w.	3	11	8	12	5.4	T.	
New York	365	414	454	29.70	30.04	+ .05	63.6	+ 4.3	84	22	72	36	3	55	27	56	50	67	0.91	− 2.3	10	10,184	sw.	55	nw.	2	11	12	8	4.9	....	
Harrisburg	374	94	104	29.65	30.05	+ .07	68.4	+ 6.7	94	19	80	38	3	57	32	58	51	59	2.29	− 1.4	9	4,197	w.	36	w.	23	11	13	7	4.9	....	
Philadelphia	117	123	184	29.93	30.05	+ .06	67.9	+ 5.7	94	23	79	40	3	57	39	58	51	60	1.68	− 1.5	7	6,445	ne.	28	nw.	18	15	9	7	4.9	....	
Scranton	805	111	119	29.19	30.04	+ .06	65.8	+ 7.0	93	22	78	33	3	54	35	58	53	67	2.26	− 1.2	10	4,485	s.	42	s.	1	11	9	11	5.1	T.	
Atlantic City	52	37	48	30.00	30.06	+ .08	59.4	+ 1.9	84	19	66	38	3	53	25	55	52	82	0.56	− 2.5	5	5,485	s.	26	ne.	27	15	10	6	4.2	....	
Cape May	17	9	56	30.05	30.07	+ .08	61.0	+ 2.4	84	13	68	42	3	54	25	56	53	81	0.41	− 2.6	8	5,881	ne.	31	ne.	8	18	11	2	3.9	....	
Baltimore	123	100	113	29.92	30.05	+ .06	69.4	+ 5.2	95	18	80	41	3	59	32	61	55	63	3.45	− 0.1	7	4,819	s.	33	sw.	12	15	11	5	3.6	....	
Washington	112	62	85	29.92	30.04	+ .04	70.0	+ 5.8	96	19	83	37	6	57	35	59	52	57	0.87	− 3.0	7	4,514	s.	30	w.	2	23	5	3	3.0	....	
Cape Henry	18	9	58	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	
Lynchburg	681	83	88	29.32	30.06	+ .06	69.2	+ 3.3	93	18	82	35	3	56	39	61	56	66	0.64	− 3.3	7	2,967	n.	27	nw.	26	16	14	1	3.7	....	
Mount Weather	1,725	10	54	28.25	30.02	+ .02	66.6	+ 7.1	88	18	76	33	3	57	26	55	47	55	1.64	− 2.1	7	9,111	w.	56	nw.	2	19	10	2	3.3	....	
Norfolk	91	102	111	29.97	30.06	+ .06	69.2	+ 3.0	94	19	78	48	3	60	26	62	58	73	0.56	− 3.5	3	6,618	s.	33	s.	1	14	14	3	3.7	....	
Richmond	144	189	197	29.92	30.07	+ .08	69.8	+ 2.5	95	18	82	38	3	58	31	....	....	....	0.66	− 3.2	5	5,152	se.	40	sw.	1	13	14	4	4.1	....	
Wytheville	2,293	40	47	27.74	30.06	+ .07	63.4	+ 2.0	86	26	77	30	3	50	38	56	50	65	1.46	− 2.4	5	3,008	nw.	19	s.	1	22	8	1	2.5	....	
South Atlantic States.							**70.9**	**+ 1.1**											**70**	**1.17**	**− 2.6**								**3.8**		
Asheville	2,255	53	75	27.77	30.08	+ .09	64.8	+ 2.2	87	17	77	36	3	53	35	57	52	69	2.66	− 1.1	10	4,738	se.	33	e.	30	16	10	5	3.8	....	
Charlotte	773	68	76	29.25	30.07	+ .08	71.0	+ 2.6	95	26	82	44	6	60	32	61	54	60	1.22	− 2.7	6	4,594	ne.	40	sw.	1	20	6	5	3.3	....	
Hatteras	11	12	47	30.05	30.06	+ .05	68.0	+ 0.9	83	26	74	50	8	62	19	64	62	84	0.76	− 3.4	6	10,463	sw.	48	nw.	8	20	6	5	3.8	....	
Manteo	12	12	46	....	....	....	68.0	....	89	19	76	45	4	60	....	....	....	....	0.76	− 3.3	1	....	ne.	....	....	....	17	7	7	....	....	....	
Raleigh	376	103	110	29.67	30.06	+ .07	70.4	+ 2.3	92	26	82	43	4	59	30	60	54	60	2.10	− 2.8	5	5,861	sw.	41	ne.	26	19	9	3	3.3	....	
Wilmington	78	81	91	29.99	30.07	+ .06	70.2	+ 1.1	93	26	79	48	7	61	30	63	59	74	0.28	− 3.8	6	6,504	sw.	27	sw.	1	13	13	5	4.4	....	
Charleston	48	11	92	30.01	30.06	+ .05	72.2	− 0.2	93	26	79	50	8	66	26	66	63	77	0.13	− 3.3	2	8,242	s.	36	e.	26	19	11	1	3.3	....	
Columbia, S. C.	351	41	57	29.69	30.06	+ .06	72.8	+ 1.0	99	26	85	43	7	61	35	61	54	56	0.70	− 2.5	2	5,276	s.	33	sw.	1	16	11	4	4.2	....	
Augusta	180	89	97	29.86	30.05	+ .06	73.7	+ 1.5	97	26	85	46	7	62	37	64	58	64	0.79	− 2.4	5	4,814	se.	25	ne.	27	18	10	3	3.4	....	
Savannah	65	150	194	29.99	30.06	+ .06	72.6	+ 0.1	96	26	81	49	7	64	32	65	62	77	0.15	− 2.9	5	8,685	se.	39	e.	15	15	10	6	4.2	....	
Jacksonville	43	96	129	29.99	30.04	+ .04	73.7	− 0.5	92	11	82	52	8	65	29	68	65	81	3.35	− 0.9	9	7,208	ne.	34	ne.	14	14	8	9	4.4	....	
Florida Peninsula.							**76.6**	**− 0.6**											**76**	**3.01**	**− 0.2**								**4.2**		
Key West	22	10	53	29.94	29.96	− .01	77.6	− 1.4	86	20	83	67	4	72	18	71	68	74	2.88	− 0.5	11	6,536	ne.	22	ne.	20	15	10	6	4.3	....	
Tampa	35	79	96	29.97	30.00	+ .01	75.6	+ 0.1	92	11	85	55	8	66	28	68	65	77	3.14	+ 0.2	8	5,803	ne.	25	n.	14	14	12	5	4.1	....	
East Gulf States.							**73.7**	**+ 1.4**											**65**	**2.69**	**− 0.8**								**3.3**		
Atlanta	1,174	190	216	28.85	30.07	+ .08	72.0	+ 2.5	94	26	82	46	3	62	27	61	54	59	2.14	− 1.0	10	7,104	ne.	34	sw.	27	17	7	7	4.1	....	
Macon	370	78	87	29.67	30.06	+ .07	73.2	+ 2.1	97	26	84	46	7	62	38	....	....	....	2.31	− 0.6	7	4,096	ne.	32	se.	22	18	7	6	3.5	....	
Thomasville	273	8	57	29.74	30.03	+ .04	74.6	+ 0.6	97	27	86	46	8	63	40	65	61	71	2.50	− 1.5	9	3,902	e.	21	sw.	1	15	12	4	3.9	....	
Pensacola	56	140	183	29.98	30.04	+ .05	74.8	0.0	92	27	81	57	3	68	21	....	....	....	2.04	− 0.6	7	7,924	s.	37	s.	20	16	13	2	3.3	....	
Anniston	741	9	57	29.30	30.09	+ .10	71.0	+ 2.6	95	31	84	43	7	58	38	....	....	....	3.29	+ 0.2	6	3,535	se.	24	sw.	1	20	3	8	3.3	....	
Birmingham	700	11	48	29.32	30.07	+ .09	72.1	+ 0.5	94	31	84	45	3	60	31	62	56	61	3.39	+ 0.3	6	4,218	ne.	26	se.	1	20	6	5	3.2	....	
Mobile	57	98	106	29.97	30.03	+ .04	75.2	+ 1.6	97	30	84	56	7	66	25	66	62	69	5.08	+ 1.1	5	4,952	n.	23	w.	1	23	6	2	2.5	....	
Montgomery	223	100	112	29.80	30.05	+ .06	74.6	+ 1.1	98	31	85	50	7	64	28	64	58	63	4.59	+ 0.8	6	4,254	ne.	24	sw.	1	17	13	1	2.8	....	
Meridian	375	84	93	29.65	30.03	+ .05	72.7	+ 1.6	98	29	85	47	7	60	33	63	57	63	1.38	− 2.5	6	3,253	ne.	18	nw.	31	19	10	2	3.1	....	
Vicksburg	247	62	74	29.79	30.06	+ .09	74.4	+ 1.5	97	30	84	50	2	64	24	64	58	61	0.65	− 3.6	6	4,123	ne.	34	nw.	20	18	10	3	2.8	....	
New Orleans	51	90	121	29.97	30.02	+ .05	75.8	+ 1.3	96	31	84	57	3	68	20	68	64	70	2.20	− 1.7	6	5,347	e.	36	n.	29	15	13	3	3.7	....	
West Gulf States.							**72.9**	**+ 0.3**											**66**	**1.56**	**− 2.6**								**3.6**		
Shreveport	249	77	84	29.77	30.04	+ .09	73.6	+ 0.4	97	30	85	47	3	63	29	63	57	61	0.89	− 3.3	3	3,611	se.	29	nw.	20	24	4	3	2.4	....	
Bentonville	1,303	11	44	28.67	30.02	+ .09	68.2	+ 1.8	92	30	80	35	2	56	35	....	....	....	0.87	− 4.4	4	4,037	s.	22	s.	10	20	8	3	3.4	....	
Fort Smith	457	79	94	29.53	30.00	+ .07	71.9	+ 2.2	93	28	83	42	1	60	31	61	55	60	1.56	− 3.4	4	5,635	e.	52	nw.	20	18	10	3	3.6	....	
Little Rock	357	139	147	29.67	30.04	+ .09	72.2	+ 1.8	94	29	83	44	2	62	28	63	58	65	0.82	− 4.3	2	5,359	sw.	37	nw.	20	17	12	2	3.3	....	
Brownsville	57	4	....	....	....	....	75.6	....	94	31	85	58	3	66	29	....	....	....	1.84	....	8	....	e.	30	n.	2	....	....	....	....	....	....	
Corpus Christi	20	69	77	29.97	29.99	+ .09	75.0	− 1.5	90	31	80	57	3	71	20	70	67	79	3.74	+ 1.0	10	11,986	se.	46	ne.	20	15	11	5	4.1	....	
Fort Worth	670	106	114	29.26	29.96	+ .05	74.0	+ 0.8	103	31	85	45	1	63	35	60	50	49	0.22	− 3.9	5	8,609	s.	34	s.	10	13	17	1	3.9	....	
Galveston	54	106	112	29.97	30.03	+ .09	75.2	− 0.2	93	31	80	56	2	71	17	68	65	74	1.90	− 1.3	7	8,029	se.	40	ne.	2	21	8	2	3.1	....	
Houston	138	111	121	29.87	30.02	....	74.5	....	97	31	84	55	3	65	25	....	....	....	1.82	....	5	5,703	se.	30	e.	11	16	12	3	3.5	....	
Palestine	510	73	79	29.49	30.02	+ .09	72.2	− 0.3	96	31	82	46	3	62	27	63	59	68	0.77	− 4.1	3	5,063	s.	35	s.	11	17	11	3	3.4	....	
San Antonio	701	80	91	29.26	29.98	+ .08	74.0	− 0.8	96	31	84	54	2	64	32	65	60	69	2.01	− 1.0	6	4,337	se.	30	ne.	11	7	20	4	5.3	....	
Taylor	583	55	63	29.40	30.01	+ .10	72.8	− 1.5	96	31	83	47	3	63	29	....	....	....	2.85	− 1.2	5	5,857	s.	38	ne.	11	17	11	3	3.3	....	
Ohio Val. and Tenn.							**69.8**	**+ 4.5**											**60**	**1.34**	**− 2.3**								**3.5**		
Chattanooga	702	189	213	29.28	30.08	+ .09	71.4	+ 2.8	95	27	83	43	3	60	32	61	54	60	1.81	− 1.8	6	5,002	ne.	35	nw.	31	20	6	5	3.4	....	
Knoxville	996	93	100	29.03	30.07	+ .08	70.4	+ 3.9	93	27	82	39	3	58	31	61	54	60	1.23	− 2.5	7	3,331	ne.	31	n.	29	13	17	1	3.6	....	
Memphis	399	76	97	29.65	30.07	+ .11	73.5	+ 2.8	97	28	83	46	3	64	26	62	54	55	0.20	− 4.1	1	5,120	sw.	27	sw.	18	20	7	4	2.8	....	
Nashville	546	108	191	29.50	30.08	+ .10	71.4	+ 2.6	96	28	83	40	3	59	33	61	55	61	1.67	− 1.8	5	5,459	n.	39	w.	31	19	8	4	3.1	....	
Lexington	989	75	102	29.03	30.08	+ .09	69.5	+ 5.2	93	28	80	36	2	59	32	....	....	....	1.07	− 2.4	7	6,328	ne.	39	sw.	1	16	9	6	3.7	....	
Louisville	525	111	132	29.50	30.08	+ .10	71.8	+ 5.1	98	28	83	39	2	60	31	61	53	56	2.08	− 1.6	6	4,782	sw.	35	w.	1	15	14	2	3.6	....	
Evansville	431	72	82	29.59	30.05	+ .08	71.8	+ 4.7	98	28	82	41	2	62	29	62	56	61	1.30	− 2.1	10	4,388	s.	35	sw.	30	14	17	0	3.2	....	
Indianapolis	822	154	164	29.18	30.06	+ .09	68.6	+ 5.3	96	28	80	35	1	58	29	58	51	58	0.91	− 3.0	6	6,486	s.	37	sw.	1	13	15	3	3.8	....	
Cincinnati	628	152	160	29.40	30.07	+ .08	69.9	+ 4.8	95	27	81	36	2	59	31	60	52	56	1.54	− 2.0	7	4,044	w.	30	w.	1	12	15	4	4.3	....	
Columbus	824	173	222	29.20	30.06	+ .08	68.6	+ 6.3	94	28	80	33	2	57	36	58	51	57	1.15	− 2.6	9	7,204	n.	52	w.	7	23	7	1	2.4	T.	
Pittsburg	842	353	410	29.16	30.05	+ .06	68.0	+ 5.4	93	22	79	34	3	57	35	57	50	55	0.42	− 2.9	3	6,954	nw.	57	nw.	31	16	12	3	3.3	T.	
Parkersburg	638	77	84	29.43	30.08	+ .09	69.1	+ 5.8	94	19	82	35	4	57	34	60	56	68	1.77	− 1.7	6	3,493	s.	36	se.	22	21	6	4	3.3	....	
Elkins	1,940	41	50	28.06	30.07	+ .07	63.0	+ 3.9	92	21	78	28	5	48	39	55	50	67	2.23	− 1.8	9	2,292	w.	15	s.	1	16	8	7	4.5	T.	

TABLE I.—*Climatological data for United States Weather Bureau stations, May, 1911*—Continued.

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.											Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.						Total.	Departure from normal.	Days with 0.01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.					
Lower Lake Region.							**63.5**	**+ 6.3**												**64**	**2.00**	**− 1.1**								**3.7**		
Buffalo	767	178	206	29.21	30.03	+ .06	60.4	+ 5.9	94	22	68	29	3	52	29	54	50	72	1.30	− 1.8	9	8,683	sw.	56	sw.	1	12	13	6	4.4	T	....
Canton	448	10	71	29.54	30.01	.....	61.8	+ 5.6	93	22	73	28	3	51	38	.....	.....	.....	2.99	+ 0.1	12	7,915	s.	54	sw.	2	16	8	7	4.2	0.2	....
Oswego	335	76	91	29.65	30.02	+ .05	59.4	+ 4.7	91	28	69	30	4	50	31	54	48	67	1.80	− 1.0	8	6,500	sw.	32	sw.	2	15	11	5	3.7	T.	....
Rochester	523	86	102	29.47	30.04	+ .07	63.7	+ 7.0	93	28	74	27	3	53	29	55	48	61	2.10	− 0.8	10	6,010	w.	39	sw.	1	16	12	3	3.6	2.0	....
Syracuse	597	97	113	29.41	30.05	+ .07	64.6	+ 7.3	92	23	75	27	3	55	27	.....	.....	.....	2.21	− 1.2	9	7,482	s.	36	w.	2	17	7	7	3.6	T.	....
Erie	714	92	102	29.28	30.04	+ .06	63.0	+ 5.7	90	28	71	32	2	54	32	55	49	61	2.49	− 0.9	13	6,230	w.	37	nw.	31	13	13	5	4.1	0.2	....
Cleveland	762	190	201	29.24	30.05	+ .07	64.4	+ 5.9	89	22	73	34	2	55	33	58	52	64	1.97	− 1.2	12	8,257	se.	60	nw.	31	14	13	4	3.7	T.	....
Sandusky	629	62	70	29.38	30.05	+ .07	65.8	+ 6.6	91	19	75	33	3	56	34	.....	.....	.....	1.72	− 1.5	11	5,371	sw.	34	w.	1	16	12	3	3.0	T.	....
Toledo	628	208	246	29.36	30.04	+ .07	67.4	+ 7.7	95	28	78	33	2	57	35	58	52	60	1.63	− 1.6	10	10,204	sw.	56	sw.	1	20	10	1	3.0	.....	....
Detroit	730	218	258	29.25	30.04	+ .07	64.7	+ 6.8	92	28	75	30	3	54	34	55	48	60	1.78	− 1.5	12	8,966	s.	56	w.	1	16	12	3	3.4	.....	....
Upper Lake Region.							**57.6**	**+ 5.4**												**69**	**3.87**	**+ 0.5**								**5.0**		
Alpena	609	13	92	29.35	30.02	+ .05	55.2	+ 5.7	94	27	66	22	3	45	37	49	45	76	3.72	+ 0.4	12	7,649	se.	47	s.	19	10	7	14	5.7	T.	....
Escanaba	612	48	82	29.33	29.99	+ .02	52.5	+ 2.5	74	27	60	22	2	45	27	49	46	80	4.42	+ 1.0	11	6,836	s.	38	n.	1	12	10	9	5.0	1.0	....
Grand Haven	632	54	92	29.33	30.00	+ .04	60.1	+ 5.3	87	27	69	31	1	51	28	54	49	68	3.40	+ 0.1	10	8,623	s.	37	w.	31	16	11	4	3.6	T.	....
Grand Rapids	675	79	87	29.26	30.02	+ .05	64.6	+ 5.6	92	27	75	32	1	54	31	57	51	65	7.18	+ 3.8	10	4,352	sw.	26	sw.	11	10	14	7	4.8	T.	....
Lansing	863	11	62	29.09	30.02	.....	63.5	.....	93	27	76	27	3	51	36	56	50	65	2.67	.....	8	4,330	sw.	31	s.	23	14	11	6	4.0	T.	....
Houghton	668	66	74	29.24	29.96	− .01	53.8	+ 4.1	92	18	65	27	2	43	41	.....	.....	.....	3.96	+ 0.7	12	5,397	w.	28	w.	11	10	11	10	5.5	T.	....
Marquette	734	77	116	29.19	29.99	+ .02	54.2	+ 5.2	91	19	64	25	2	44	39	48	43	70	3.06	− 0.3	12	8,032	s.	50	s.	18	8	16	7	5.5	T.	....
Port Huron	638	78	120	29.34	30.03	+ .04	60.8	+ 7.1	90	27	72	28	3	49	34	54	49	68	2.10	− 1.1	10	7,144	ne.	38	w.	1	16	7	8	3.9	T.	....
Sault Sainte Marie	614	11	61	29.32	30.02	+ .07	53.0	+ 5.3	90	19	64	22	2	42	41	48	43	74	4.19	+ 0.9	14	6,699	se.	34	w.	12	10	10	11	5.8	3.2	....
Chicago	823	140	310	29.15	30.02	+ .06	65.9	+ 9.4	94	26	74	33	2	57	35	56	50	62	3.37	0.0	12	9,745	sw.	38	s.	19	13	10	8	4.2	0.1	....
Milwaukee	681	122	139	29.28	30.02	+ .06	59.9	+ 6.3	94	27	69	31	2	50	42	53	47	65	1.82	− 1.6	9	7,205	sw.	38	ne.	1	13	9	9	4.6	T.	....
Green Bay	617	49	86	29.31	29.97	+ .01	59.6	+ 5.1	88	25	70	22	2	49	34	53	48	69	5.72	+ 2.2	13	8,918	s.	68	n.	1	6	15	10	6.3	2.0	....
Duluth	1,133	11	47	28.73	29.95	− .01	51.4	+ 2.8	81	18	62	24	2	41	41	45	40	70	3.45	0.0	14	10,444	ne.	54	sw.	11	8	13	10	5.7	0.1	....
North Dakota.							**55.7**	**+ 1.4**												**66**	**2.76**	**+ 0.2**								**5.1**		
Moorhead	940	8	57	28.89	29.90	− .04	58.0	+ 3.2	93	26	72	21	2	44	49	51	46	69	3.92	+ 1.0	11	7,358	nw.	39	nw.	10	15	9	7	4.2	0.2	....
Bismarck	1,674	4	57	28.14	29.91	− .01	56.8	+ 1.6	92	17	71	18	1	42	42	49	42	63	1.18	− 1.3	10	10,189	nw.	46	nw.	6	13	12	6	4.5	.....	....
Devils Lake	1,482	11	44	28.32	29.89	− .05	54.0	+ 1.3	88	17	66	19	2	42	37	47	40	66	3.13	+ 0.9	11	10,302	se.	48	ne.	26	9	15	7	5.5	T.	....
Williston	1,872	14	56	27.90	29.87	− .06	54.0	− 0.3	87	5	67	16	2	41	52	46	40	66	2.81	+ 0.6	14	7,672	se.	39	e.	9	6	12	13	6.2	T.	....
Upper Miss. Valley.							**67.3**	**+ 5.4**												**60**	**2.47**	**− 1.7**								**4.4**		
Minneapolis	918	102	208	.....	.....	.....	63.6	.....	92	26	75	30	2	52	39	.....	.....	.....	4.10	+ 0.2	9	10,193	s.	43	n.	1	10	11	10	5.3	.....	....
St. Paul	940	203	212	29.01	29.91	− .03	62.7	+ 4.5	90	17	74	29	2	51	37	53	45	57	3.99	+ 0.4	9	9,130	s.	45	s.	18	10	18	3	4.2	.....	....
La Crosse	714	11	48	29.19	29.96	+ .02	64.2	+ 4.7	91	26	76	26	2	53	36	.....	.....	.....	5.20	+ 1.4	13	4,574	se.	27	s.	10	9	12	10	5.3	5.2	....
Madison	974	70	78	28.96	29.99	+ .03	63.4	+ 5.8	88	26	72	31	2	54	30	55	49	63	2.63	− 1.0	10	7,378	sw.	42	n.	1	12	10	9	4.9	T.	....
Charles City	1,015	10	49	28.89	29.96	+ .02	63.4	+ 3.9	91	25	75	30	1	51	35	56	51	67	5.85	+ 0.9	12	6,384	sw.	33	sw.	18	6	13	12	5.8	2.0	....
Davenport	606	71	79	29.34	29.99	+ .04	68.0	+ 6.5	93	25	79	33	2	57	34	58	51	59	2.25	− 1.9	9	5,808	sw.	30	s.	19	17	9	5	4.0	.....	....
Des Moines	861	84	101	29.04	29.94	+ .01	65.9	+ 4.3	93	25	77	34	1	55	36	57	51	62	2.44	− 2.1	11	6,551	sw.	35	sw.	18	7	9	15	6.5	T.	....
Dubuque	698	100	115	29.26	30.00	+ .05	65.9	+ 5.1	91	25	76	31	2	56	31	57	50	61	2.84	− 1.5	12	5,227	s.	25	n.	1	12	12	7	4.8	T.	....
Keokuk	614	64	78	29.34	30.00	+ .06	70.2	+ 7.0	94	25	81	35	2	59	34	59	53	61	0.42	− 3.8	6	6,216	s.	30	s.	19	17	12	2	3.2	.....	....
Cairo	350	87	93	29.67	30.05	+ .09	72.4	+ 4.9	96	28	82	43	2	62	28	62	55	59	0.22	− 3.6	4	5,500	s.	29	n.	31	15	13	3	3.6	.....	....
La Salle	536	56	64	29.45	30.02	+ .06	67.6	+ 6.8	95	25	80	32	2	56	36	.....	.....	.....	1.97	− 2.0	4	6,115	sw.	31	w.	19	14	12	5	3.9	.....	....
Peoria	609	11	45	29.36	30.03	+ .07	68.2	+ 6.5	95	26	81	30	2	55	39	58	52	61	1.03	− 3.2	7	5,779	s.	28	s.	10	13	10	8	4.5	.....	....
Springfield, Ill	644	10	91	29.34	30.02	+ .07	70.1	+ 6.6	95	26	82	35	2	58	36	59	52	58	1.18	− 3.3	7	6,396	s.	29	s.	19	15	13	3	3.9	.....	....
Hannibal	534	75	109	29.44	30.00	+ .06	69.4	+ 5.0	93	25	81	35	2	58	40	.....	.....	.....	0.70	− 4.3	5	7,369	sw.	34	s.	19	16	12	3	3.6	.....	....
St. Louis	567	208	317	29.42	30.02	+ .07	71.3	+ 4.8	94	26	81	39	2	62	27	60	53	56	2.26	− 2.0	4	7,219	s.	36	nw.	31	22	7	2	2.9	.....	....
Missouri Valley.							**65.2**	**+ 3.2**												**61**	**1.90**	**− 2.3**								**4.5**		
Columbia, Mo	784	11	84	29.18	29.99	+ .05	68.6	+ 4.1	94	24	80	33	2	57	33	.....	.....	.....	1.27	− 3.6	7	5,480	s.	28	sw.	1	20	7	4	3.8	.....	....
Kansas City	963	161	181	28.94	29.96	+ .04	68.6	+ 4.1	92	24	78	36	1	59	28	58	51	57	1.10	− 4.0	9	9,922	s.	48	sw.	10	12	15	4	4.2	.....	....
St. Joseph	967	11	49	28.93	29.95	.....	68.0	.....	94	24	78	35	2	58	33	58	51	61	5.31	.....	13	7,062	s.	40	nw.	10	13	10	8	5.0	T.	....
Springfield, Mo	1,324	98	104	28.63	30.02	+ .09	68.2	+ 3.6	89	28	78	33	2	58	29	59	53	64	0.34	− 5.2	5	7,475	s.	38	w.	1	19	6	6	3.2	T.	....
Iola	984	11	50	28.95	29.98	+ .06	68.2	+ 3.7	92	24	80	33	2	57	37	.....	.....	.....	2.63	− 2.4	11	6,395	s.	30	s.	10	12	17	2	4.0	.....	....
Topeka	983	85	101	.....	.....	.....	68.1	+ 3.1	95	24	79	35	2	58	33	.....	.....	.....	1.91	− 3.0	9	9,476	s.	40	s.	18	13	15	3	3.9	.....	....
Lincoln	1,189	11	84	28.67	29.92	+ .01	65.4	+ 2.5	94	25	76	31	2	54	44	56	50	63	3.95	− 0.3	11	9,724	s.	44	nw.	10	10	9	12	5.6	T.	....
Omaha	1,105	115	121	28.76	29.93	+ .01	66.3	+ 3.8	94	25	76	33	1	56	39	57	51	62	2.70	− 1.8	11	6,618	s.	39	n.	1	13	8	10	4.8	0.2	....
Valentine	2,598	47	54	27.22	29.91	+ .01	58.8	+ 0.9	91	9	71	20	1	47	40	49	42	63	1.37	− 2.0	10	9,126	s	44	nw.	6	14	11	6	4.2	.....	....
Sioux City	1,135	94	164	28.69	29.88	− .04	64.2	+ 3.4	92	25	75	31	1	54	33	55	49	62	1.54	− 2.8	6	10,132	s.	48	s.	14	11	14	6	4.5	1.0	....
Pierre	1,572	70	75	28.25	29.90	− .01	62.0	+ 2.7	96	9	75	26	1	49	38	51	43	57	1.66	− 0.5	10	9,369	se.	43	nw.	11	12	12	7	4.8	.....	....
Huron	1,306	56	67	28.52	29.91	− .01	61.0	+ 3.7	95	9	75	23	2	47	44	52	43	60	2.97	0.0	8	9,219	s.	42	s.	6	11	14	6	4.6	.....	....
Yankton	1,232	49	57	28.61	29.91	− .01	63.1	+ 3.1	94	18	74	25	1	52	40	.....	.....	.....	1.42	− 2.5	6	7,606	e.	36	s.	6	5	24	2	5.4	7.0	....
Northern Slope.							**52.8**	**− 0.2**												**62**	**1.21**	**− 1.1**								**5.4**		
Havre	2,505	11	44	27.25	29.86	− .04	53.6	− 0.5	91	5	66	31	1	42	40	46	40	67	1.45	− 0.6	6	7,123	w.	46	sw	6	7	15	9	6.0	.....	....
Miles City	2,371	26	48	27.36	29.90	− .01	58.4	+ 1.7	90	5	71	24	1	46	43	48	41	61	0.74	− 1.2	6	5,377	ne.	30	w.	10	13	11	7	4.8	.....	....
Helena	4,110	8	56	25.71	29.90	− .03	49.6	− 2.0	85	5	61	30	1	38	39	41	35	65	2.07	+ 0.1	14	5,530	w.	58	sw	6	6	14	11	6.1	5.2	....
Kalispell	2,962	11	34	26.85	29.90	+ .02	48.7	− 2.3	83	31	60	28	7	38	39	43	38	71	0.96	− 1.1	11	4,183	se.	26	sw.	6	4	13	14	6.6	T.	....
Rapid City	3,234	46	50	26.52	29.89	− .01	56.9	+ 2.7	89	6	70	26	1	44	40	46	35	49	0.50	− 2.4	8	7,328	se.	40	sw.	18	9	16	6	4.9	.....	....
Cheyenne	6,088	56	64	23.95	29.85	.00	52.2	+ 1.2	79	25	66	25	1	38	42	46	42	72	0.33	− 2.1	11	8,614	s.	48	nw.	18	9	15	7	5.3	T.	....
Lander	5,372	26	36	24.55	29.85	− .03	51.9	− 0.1	82	5	66	27	19	38	47	42	30	50	0.93	− 2.0	8	3,885	sw.	27	nw.	19	14	16	1	3.7	T.	....
Sheridan	3,790	9	47	26.01	29.89	.....	52.4	.....	86	31	66	28	7	38	49	45	38	64	1.22	.....	12	6,426	nw.	44	nw.	18	9	8	14	6.0	T.	....
Yellowstone Park	6,200	11	48	23.80	29.88	− .03	44.2	− 3.2	77	31	56	24	27	33	43	36	28	59	2.19	+ 0.3	12	6,410	sw.	44	sw.	6	5	17	9	5.5	8.2	....
North Platte	2,821	11	51	27.03	29.93	+ .05	59.5	+ 0.5	95	24	72	23	1	46	46	50	44	64	1.73	− 1.3	11	7,156	s.	36	nw.	18	11	11	9	5.1	0.5	....
Middle Slope.							**64.9**	**+ 2.0**												**56**	**2.52**	**− 1.2**								**4.9**		
Denver	5,291	129	136	24.66	29.84	.00	59.0	+ 2.3	85	17	73	33	1	45	40	45	31	46	0.52	− 2.0	7	7,071	sw.	39	s.	25	9	18	4	4.9	.....	....
Pueblo	4,685	80	86	25.22	29.84	+ .01	61.2	+ 1.7	88	18	76	31	2	46	43	46	32	44	0.40	− 1.3	5	5,983	se.	47	nw.	10	11	14	6	4.6	.....	....
Concordia	1,398	42	50	28.48	29.94	+ .03	66.3	+ 2.6	94	24	77	31	2	56	35	56	50	60	2.94	− 1.8	9	7,573	s.	39	nw.	30	5	17	9	6.0	T.	....
Dodge City	2,509	11	51	27.36	29.93	+ .06	64.3	+ 0.8	93	9	76	30	1	53	41	55	50	67	3.95	+ 0.6	17	11,578	s.	43	se.	26	10	16	5	4.8	.....	....
Wichita	1,358	98	121	28.57	29.98	+ .08	67.6	+ 1.7	93	24	78	35	2	58	39	58	51	60	4.66	− 0.3	8	7,014	s.	36	ne.	31	8	16	7	5.4	.....	....
Oklahoma	1,214	10	47	28.71	29.97	+ .08	71.2	+ 3.1	95	19	83	37	1	59	39	59	52	57	2.65	− 3.1	7	12,417	s.	42	s.	26	16	12	3	3.6	.....	....

TABLE I.—*Climatological data for United States Weather Bureau stations, May, 1911*—Continued.

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.										Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Precipitation, inches.			Wind.					Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness, tenths.	Total snowfall.	Snow on ground at end of month.
	Barometer above sea level, feet.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.					Total.	Departure from normal.	Days with 0.01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.						
Southern Slope.							**70.8**	**+ 0.2**											**59**	**2.40**	**− 0.5**									**4.6**		
Abilene	1,738	10	52	28.18	29.95	+ .08	72.8	+ 0.9	97	19	84	43	1	61	33		60	51	54	0.06	− 3.7	1	8,957	s.	31	ne.	20	14	9	8	4.7	.....	.....
Amarillo	3,676	10	49	26.25	29.92	+ .08	65.6	+ 1.3	92	9	78	36	1	53	39		55	48	62	5.88	+ 2.3	8	11,142	se.	36	s.	6	15	14	2	4.3	.....	.....
Del Rio	944	8	57	28.96	29.93	+ .08	77.2	+ 0.3	101	19	88	54	22	67	37		.....	.....	.....	0.27	− 2.7	1	7,503	se.	33	se.	13	5	20	6	5.6	.....	.....
Roswell	3,578	9	57	26.31	29.88	+ .06	67.5	− 1.9	93	9	83	39	1	52	46		55	47	60	3.38	+ 2.2	6	4,819	s.	39	n.	29	13	14	4	3.8	.....	.....
Southern Plateau.							**64.4**	**− 1.6**											**32**	**0.25**	**− 0.2**									**2.2**		
El Paso	3,762	110	133	26.10	29.77	− .01	73.0	+ 0.9	95	30	86	47	1	60	35		52	30	28	0.39	0.0	3	8,635	e.	44	sw.	25	22	8	1	2.3	.....	.....
Santa Fe	7,013	8	56	23.24	29.80	− .01	56.5	− 0.2	78	30	69	30	11	44	33		43	29	38	1.00	− 0.1	7	7,931	se.	40	e.	28	18	11	2	3.4	0.1	.....
Flagstaff	6,907	8	57	23.30	29.80	+ .05	49.5	− 1.2	74	22	67	22	11	32	46		35	17	32	0.08	− 1.1	1	8,542	sw.	44	sw.	25	24	7	0	1.7	T.	.....
Phoenix	1,108	50	56	28.65	29.78	.00	74.1	− 0.7	99	23	90	49	16	58	46		52	29	23	0.00	0.0	0	3,598	e.	33	sw.	25	23	8	0	1.9	.....	.....
Yuma	141	9	58	29.64	29.79	.06	74.2	− 2.6	102	22	93	48	16	56	48		55	39	34	0.00	0.0	0	4,717	sw.	30	n.	10	31	0	0	0.3	.....	.....
Independence	3,910	11	42	25.85	29.80	− .04	58.8	− 5.7	88	18	75	33	15	43	46		44	27	34	0.04	− 0.1	1	6,372	nw.	36	w.	23	19	8	4	3.3	.....	.....
Middle Plateau.							**54.5**	**− 1.8**											**41**	**0.47**	**− 0.7**									**4.5**		
Reno	4,532	56	63	25.40	29.91	.00	50.0	− 3.6	80	21	63	25	6	37	44		39	28	49	0.32	− 0.5	4	6,684	w.	38	w.	15	12	10	9	4.5	T.	.....
Tonopah	6,090	12	20	23.96	29.81	.....	51.6	.....	76	22	64	25	6	40	39		38	23	36	T.	− 1.4	0	8,117	se.	49	nw.	18	10	19	2	4.2	T.	.....
Winnemucca	4,344	18	56	25.54	29.92	+ .01	50.8	− 3.6	80	4	66	26	10	36	43		39	28	51	0.42	− 0.6	7	5,381	sw.	35	sw.	23	10	7	14	5.6	T.	.....
Modena	5,479	10	43	24.52	29.82	.00	52.1	− 2.4	79	22	69	24	11	36	45		37	18	33	0.06	− 0.8	2	10,982	sw.	52	sw.	23	15	13	3	4.0	.....	.....
Salt Lake City	4,360	147	189	25.50	29.82	− .04	57.2	− 1.1	85	30	68	32	10	46	30		44	31	44	1.84	− 0.1	9	7,215	nw.	45	sw.	8	15	13	3	4.5	T.	.....
Durango	6,546	18	56	23.62	29.84	+ .02	53.8	− 1.2	77	30	70	26	11	38	41		40	26	42	0.59	− 0.6	5	5,031	nw.	32	s.	14	12	14	5	4.3	.....	.....
Grand Junction	4,608	43	51	25.27	29.80	− .03	63.0	+ 1.4	88	31	77	37	20	49	38		46	30	33	0.03	− 0.9	1	5,701	se.	37	s.	25	12	18	1	4.1	.....	.....
Northern Plateau.							**53.0**	**− 3.9**											**57**	**2.08**	**+ 0.2**									**6.0**		
Baker	3,406	48	53	26.38	29.97	+ .01	47.4	− 3.3	81	31	59	27	9	36	39		40	33	62	1.47	− 0.3	13	5,125	se.	27	sw.	8	5	17	9	5.6	1.0	.....
Boise	2,739	78	86	27.08	29.94	.00	53.9	− 3.7	85	4	65	32	10	43	36		44	34	54	2.57	+ 1.3	10	4,810	se.	29	w.	12	9	11	11	5.5	.....	.....
Lewiston	757	10	51	29.13	29.94	− .02	55.6	− 5.2	91	31	68	37	9	44	41		.....	.....	.....	1.86	+ 0.2	12	4,054	e.	54	w.	5	2	14	15	7.3	.....	.....
Pocatello	4,477	46	54	25.38	29.88	− .01	52.2	− 3.3	81	31	65	31	7	40	42		42	31	52	1.62	− 0.6	13	6,540	se.	48	sw.	5	11	13	7	4.9	T.	.....
Spokane	1,929	101	110	27.89	29.94	− .02	52.5	− 3.6	87	31	63	33	7	42	39		44	37	61	1.33	− 0.3	12	5,532	sw.	28	sw.	18	4	9	18	7.1	.....	.....
Walla Walla	1,000	71	79	28.88	29.96	.00	56.4	− 4.3	89	31	67	39	9	46	36		47	37	54	3.64	+ 1.8	15	4,794	s.	25	n.	26	10	6	15	5.5	.....	.....
North Pacific Coast Region.							**50.9**	**− 2.3**											**78**	**3.38**	**+ 0.8**									**6.9**		
North Head	211	11	56	29.82	30.05	+ .02	47.8	− 3.4	58	29	51	42	5	45	10		46	45	89	5.14	+ 2.8	17	15,183	nw.	78	se.	17	2	7	22	7.8	.....	.....
Port Crescent	259	8	53	29.73	30.01	− .01	47.5	− 1.6	67	24	54	33	11	41	29		.....	.....	.....	2.89	+ 0.6	16	3,613	w.	16	n.	22	2	18	11	6.4	.....	.....
Seattle	125	185	224	29.88	30.01	.00	52.7	− 2.3	78	29	60	40	11	46	29		47	43	73	2.48	+ 0.2	18	6,446	s.	34	sw.	1	6	9	16	7.1	.....	.....
Tacoma	213	113	120	29.78	30.01	− .01	52.2	− 2.3	76	29	60	36	11	44	30		47	43	76	3.18	+ 0.6	18	5,005	sw.	24	sw.	1	7	7	17	6.7	.....	.....
Tatoosh Island	86	7	57	29.90	29.99	− .02	48.0	− 1.6	66	24	52	40	6	44	21		46	44	87	4.25	+ 0.2	13	9,063	s.	68	s.	3	6	6	19	7.3	.....	.....
Portland, Oreg.	153	68	106	29.85	30.01	− .02	54.3	− 2.5	84	30	62	39	24	46	32		49	46	76	3.95	+ 1.6	18	4,899	nw.	32	s.	18	4	7	20	7.3	.....	.....
Roseburg	510	9	57	29.47	30.03	.00	53.8	− 2.2	87	30	66	34	11	42	42		47	42	70	1.75	− 0.3	16	3,437	nw.	24	sw.	17	7	12	12	5.8	.....	.....
Middle Pacific Coast Region.							**56.9**	**− 2.6**											**70**	**0.87**	**− 0.4**									**4.3**		
Eureka	80	73	89	30.01	30.08	− .03	50.6	− 1.5	68	4	55	41	6	46	23		48	40	86	3.52	+ 1.0	14	7,216	n.	34	sw.	17	3	16	12	6.4	.....	.....
Mount Tamalpais	2,375	11	18	27.52	30.01	+ .01	50.5	.....	79	21	58	35	24	44	27		44	38	70	0.77	− 0.7	8	14,001	nw.	78	nw.	12	17	4	10	4.1	.....	.....
Point Reyes Light	490	7	18	29.46	29.97	.....	50.6	.....	76	21	54	45	16	47	26		.....	.....	.....	0.42	.....	6	19,882	nw.	80	nw.	12	12	9	10	5.0	.....	.....
Red Bluff	332	50	56	29.59	29.94	− .01	62.2	− 4.3	90	21	73	41	6	51	34		50	38	51	1.03	− 0.3	4	4,577	se.	27	nw.	19	13	11	7	4.1	.....	.....
Sacramento	69	106	117	29.89	29.96	+ .02	59.8	− 3.1	89	21	70	44	9	49	31		53	48	71	0.03	− 1.0	2	7,414	s.	40	sw.	23	14	13	4	3.5	.....	.....
San Francisco	155	200	204	29.84	30.01	+ .02	55.6	+ 0.1	85	20	62	46	24	49	32		49	44	72	0.28	− 0.5	4	6,832	w.	27	sw.	27	13	12	6	4.3	.....	.....
San Jose	141	12	110	29.85	30.00	.....	56.5	− 4.2	88	21	69	37	1	44	40		.....	.....	.....	0.21	− 0.5	3	5,086	nw.	23	nw.	18	19	9	3	3.5	.....	.....
Southeast Farallon	30	9	17	30.01	30.04	.....	51.0	.....	60	3	53	48	28	49	9		.....	.....	.....	0.25	− 0.6	7	14,261	nw.	51	nw.	13	16	10	5	3.8	.....	.....
South Pacific Coast Region.							**60.1**	**− 1.6**											**68**	**0.08**	**− 0.5**									**3.6**		
Fresno	330	67	70	29.59	29.94	+ .02	64.0	− 4.4	97	22	78	41	6	50	39		51	38	48	0.22	− 0.4	1	5,137	nw.	24	w.	18	20	10	1	2.5	.....	.....
Los Angeles	338	159	191	29.58	29.94	− .01	61.4	+ 0.9	94	21	70	48	16	53	35		53	48	70	0.02	− 0.5	2	4,648	sw.	22	sw.	14	13	16	2	3.7	.....	.....
San Diego	87	94	102	29.86	29.95	.00	59.3	− 1.5	74	21	64	49	16	54	22		54	52	78	0.01	− 0.4	1	4,874	nw.	21	nw.	21	20	8	3	3.3	.....	.....
San Luis Obispo	201	47	54	29.80	30.02	+ .02	55.8	− 0.9	93	21	65	41	27	46	43		49	45	75	0.08	− 0.8	2	5,065	nw.	30	w.	8	12	8	11	4.7	.....	.....
West Indies.																																
Grand Turk	11	6	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....		.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan	82	48	90	29.87	29.95	.....	77.5	.....	88	19	83	69	3	72	17		.....	.....	.....	10.49	+ 5.7	24	7,128	e.	31	w.	22	4	11	16	7.0	.....	.....

TABLE II.—*Accumulated amounts of precipitation for each five minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any five minutes, or 0.80 inch in one hour, during May, 1911, at all stations furnished with self-registering gages.*

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.												
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Abilene, Tex.	27			0.06														0.03			
Albany, N. Y.	19			0.75														0.65			
Alpena, Mich.	31			0.74														0.38			
Amarillo, Tex.	26	3.00 p. m.	6.23 p. m.	0.60	5.43 p. m.	5.52 p. m.	0.14	0.32	0.43												
	28	3.00 a. m.	7.15 a. m.	1.63	4.50 a. m.	5.05 a. m.	0.66	0.22	0.32	0.48											
	29	2.30 a. m.	5.30 a. m.	1.00	2.50 a. m.	3.05 a. m.	0.03	0.17	0.50	0.70											
	29	6.46 p. m.	8.55 p. m.	1.90	6.49 p. m.	7.27 p. m.	0.02	0.27	0.48	0.69	1.01	1.20	1.37	1.59	1.70						
Anniston, Ala.	21	3.20 p. m.	4.50 p. m.	0.75	3.23 p. m.	3.55 p. m.	0.02	0.27	0.39	0.45	0.47	0.57	0.67	0.70							
	22–23	6.33 p. m.	D. N. a. m.	1.32	6.41 p. m.	7.28 p. m.	0.01	0.15	0.21	0.30	0.37	0.55	0.69	0.79	0.87	0.94	0.98				
Asheville, N. C.	18	2.37 p. m.	4.12 p. m.	1.11	2.56 p. m.	3.33 p. m.	0.04	0.10	0.31	0.53	0.67	0.79	0.90	0.95	0.98						
	20	2.05 p. m.	7.25 p. m.	0.95	3.39 p. m.	3.46 p. m.	0.09	0.29	0.34												
Atlanta, Ga.	20			0.53														0.46			
Atlantic City, N. J.	8			0.25														0.14			
Augusta, Ga.	13			0.31														0.24			
Baltimore, Md.	31	4.35 p. m.	9.00 p. m.	2.05	5.20 p. m.	5.45 p. m.	0.03	0.06	0.13	0.32	0.59	0.77									
					7.42 p. m.	8.15 p. m.	0.83	0.35	0.64	0.76	0.86	0.94	1.04	1.15							
Bentonville, Ark.	31			0.48														0.38			
Binghamton, N. Y.	31	6.55 p. m.	9.30 p. m.	0.57	7.07 p. m.	7.16 p. m.	0.03	0.23	0.33												
Birmingham, Ala.	20	2.04 p. m.	6.50 p. m.	0.82	2.09 p. m.	2.54 p. m.	0.01	0.23	0.32	0.34	0.36	0.42	0.51	0.54	0.65	0.71					
	21	4.20 p. m.	11.20 p. m.	1.30	8.24 p. m.	8.56 p. m.	0.20	0.28	0.46	0.54	0.63	0.80	0.94	0.99							
	22	3.00 p. m.	5.30 p. m.	0.53	3.14 p. m.	3.29 p. m.	0.01	0.15	0.36	0.49											
Bismarck, N. Dak.	15			0.50														0.20			
Block Island, R. I.	8			0.55														0.42			
Boise, Idaho.	15			1.65														0.23			
Boston, Mass.	25			0.17														0.10			
Buffalo, N. Y.	1			0.52														0.24			
Burlington, Vt.	1			0.66														0.42			
Cairo, Ill.	12			0.10														0.10			
Canton, N. Y.	19	7.05 a. m.	11.15 a. m.	0.89	9.13 a. m.	9.31 a. m.	0.21	0.12	0.28	0.43											
Charles City, Iowa.	19	3.18 p. m.	5.33 p. m.	1.16	3.23 p. m.	4.24 p. m.	0.01											1.08			
Charleston, S. C.	16			0.11														0.10			
Charlotte, N. C.	13			0.36														0.30			
Chattanooga, Tenn.	22–23	6.12 p. m.	4.08 a. m.	0.71	7.43 p. m.	8.08 p. m.	0.11	0.15	0.26	0.39	0.46	0.50									
Cheyenne, Wyo.	10			0.13														0.09			
Chicago, Ill.	21	2.25 p. m.	4.25 p. m.	0.58	3.00 p. m.	3.06 p. m.	0.01	0.30													
	28	5.03 p. m.	9.37 p. m.	0.62	5.07 p. m.	5.27 p. m.	0.01	0.28	0.38	0.44	0.49										
Cincinnati, Ohio.	30	8.20 p. m.	10.35 p. m.	1.14	8.29 p. m.	9.08 p. m.	0.01	0.06	0.17	0.27	0.34	0.42	0.57	0.69	0.76						
Cleveland, Ohio.	31	11.18 a. m.	1.58 p. m.	0.79	11.21 a. m.	11.35 a. m.	0.01	0.25	0.50	0.57	0.59										
Columbia, Mo.	31	D. N. a. m.	D. N. a. m.	0.58	3.23 a. m.	3.33 a. m.	0.08	0.20	0.30												
Columbia, S. C.	31			0.56														0.38			
Columbus, Ohio.	31			0.27														0.26			
Concord, N. H.	19			0.32														0.31			
Concordia, Kans.	7	6.38 p. m.	7.33 p. m.	0.34	7.00 p. m.	7.10 p. m.	0.02	0.10	0.30												
	30	7.47 p. m.	10.15 p. m.	1.06	8.06 p. m.	8.47 p. m.	0.02	0.05	0.22	0.38	0.64	0.76	0.80	0.91	0.99						
Corpus Cristi, Tex.	12	5.39 a. m.	8.14 a. m.	2.25	6.07 a. m.	6.57 a. m.	0.03	0.06	0.20	0.53	0.72	0.82	0.96	1.24	1.64	1.89	1.96				
	20	7.54 p. m.	10.55 p. m.	0.68	8.00 p. m.	8.20 p. m.	0.02	0.07	0.18	0.34	0.55										
Davenport, Iowa.	14			1.33														0.61			
Del Rio, Tex.	2			0.27														0.12			
Denver, Colo.	29			0.13														0.13			
Des Moines, Iowa.	10			0.27														0.27			
Detroit, Mich.	31			0.47														0.41			
Devils Lake, N. Dak.	9	D. N. a. m.	2.12 a. m.	0.60	1.34 a. m.	1.54 a. m.	0.08	0.06	0.17	0.37	0.50										
Dodge City, Kans.	27	6.25 p. m.	10.30 p. m.	1.50	7.35 p. m.	8.25 p. m.	0.11	0.09	0.14	0.22	0.33	0.46	0.62	0.70	0.86	0.98	1.09				
Dubuque, Iowa.	22			0.48														0.47			
Duluth, Minn.	15			0.85														0.27			
Durango, Colo.	14			0.46														*			
Eastport, Me.	2			0.06														†			
Elkins, W. Va.	19	12.30 p. m.	2.10 p. m.	0.87	12.40 p. m.	1.25 p. m.	0.04	0.07	0.10	0.14	0.21	0.38	0.50	0.57	0.71	0.78					
El Paso, Tex.	31	5.07 p. m.	5.35 p. m.	0.36	5.08 p. m.	5.20 p. m.	0.01	0.21	0.31	0.35											
Erie, Pa.	1	2.20 p. m.	3.00 p. m.	0.56	2.24 p. m.	2.35 p. m.	0.02	0.09	0.35	0.39											
Escanaba, Mich.	17	3.10 p. m.	5.35 p. m.	0.68	3.21 p. m.	3.35 p. m.	0.01	0.12	0.36	0.56											
	30	10.55 p. m.	D. N. p. m.	0.67	11.00 p. m.	11.29 p. m.	0.01	0.08	0.14	0.21	0.29	0.46	0.59								
Eureka, Cal.	4			0.82														0.25			
Evansville, Ind.	30	1.30 p. m.	3.20 p. m.	0.41	1.46 p. m.	2.01 p. m.	0.01	0.13	0.28	0.36											
Flagstaff, Ariz.	14			0.08														0.07			
Fort Smith, Ark.	20	11.59 a. m.	4.50 p. m.	0.84	12.03 p. m.	12.14 p. m.	T.	0.30	0.50	0.53											
Fort Worth, Tex.	10			0.13														0.13			
Fresno, Cal.	5			0.22														0.13			
Galveston, Tex.	11			0.42														0.30			
Grand Haven, Mich.	31			0.54														0.40			
Grand Junction, Colo.	19			0.03														0.03			
Grand Rapids, Mich.	20	2.40 p. m.	6.30 p. m.	2.63	3.02 p. m.	5.50 p. m.	0.05	0.06	0.15	0.20	0.23	0.30	0.39	0.45	0.54	0.59	0.63				
								0.65	0.69	0.72	0.75	0.81	0.92	1.05	1.17	1.20	1.24				
								1.29	1.42	1.49	1.61	1.77	1.84	1.96	1.98	2.01	2.05				
								2.11	2.34	2.45	2.51										
	22	12.07 p. m.	1.58 p. m.	0.80	12.22 p. m.	12.46 p. m.	0.01	0.13	0.16	0.17	0.32	0.46									
	31	5.20 a. m.	8.15 a. m.	0.83	5.28 a. m.	5.50 a. m.	0.02	0.10	0.15	0.29	0.48										
Green Bay, Wis.	18	12.15 a. m.	D. N. a. m.	0.67	1.15 a. m.	1.45 a. m.	0.08	0.16	0.19	0.19	0.20	0.37	0.59								
	23	11.55 a. m.	12.50 p. m.	0.47	12.00 m.	12.20 p. m.	0.01	0.12	0.28	0.36	0.41										
Hannibal, Mo.	31			0.41														0.36			
Harrisburg, Pa.	1	7.05 p. m.	7.38 p. m.	0.58	7.06 p. m.	7.22 p. m.	0.01	0.21	0.36	0.52	0.57										
	31	3.21 p. m.	7.42 p. m.	0.66	3.39 p. m.	4.07 p. m.	0.01	0.22	0.34	0.35	0.35	0.45	0.49								
Hartford, Conn.	29			0.49														0.48			
Hatteras, N. C.	7			0.45														0.16			
Havre, Mont.	25			0.74														0.14			
Helena, Mont.	15			0.70														†			
Houghton, Mich.	17–18	11.00 p. m.	5.00 a. m.	0.66	2.07 a. m.	2.22 a. m.	0.25	0.17	0.32	0.39											
Huron, S. Dak.	13	7.25 p. m.	D. N. p. m.	0.75	8.46 p. m.	9.02 p. m.	0.08	0.06	0.19	0.35	0.38										
Independence, Cal.	30			0.04														0.02			
Indianapolis, Ind.	22			0.29														0.21			
Iola, Kans.	19	4.30 p. m.	9.40 p. m.	1.69	4.36 p. m.	5.34 p. m.	0.01	0.17	0.39	0.49	0.58	0.69	0.77	0.85	0.94	1.04	1.10	1.20			
Jacksonville, Fla.	4			1.72														0.66			
Kalispell, Mont.	22			0.09														0.08			
Kansas City, Mo.	19			0.23														0.19			
Keokuk, Iowa.	19			0.10														0.10			
Key West, Fla.	4	6.50 p. m.	11.30 p. m.	0.75	7.54 p. m.	8.12 p. m.	0.20	0.21	.34	0.43	0.50										
	20	4.55 p. m.	6.10 p. m.	0.94	4.59 p. m.	5.48 p. m.	0.01	0.09	0.10	0.16	0.20	0.25	0.43	0.51	0.67	0.85	0.91				
Knoxville, Tenn.	29			0.22														0.21			
La Crosse, Wis.	19	4.57 p. m.	9.50 p. m.	1.53	5.10 p. m.	5.40 p. m.	0.02	0.16	0.28	0.48	0.58	0.64	0.69								
Lander, Wyo.	26			0.41														0.15			
La Salle, Ill.	28	3.20 p. m.	4.45 p. m.	1.58	3.28 p. m.	4.15 p. m.	0.01	0.09	0.10	0.23	0.45	0.57	0.66	1.01	1.39	1.51	1.55				
Lewiston, Idaho.	3			0.22														0.22			

TABLE II.—*Accumulated amounts of precipitation for each five minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any five minutes, or 0.80 inch in one hour, during May, 1911, at all stations furnished with self-registering gages*—Continued.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.												
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Lexington, Ky	21	1.35 p. m.	1.55 p. m.	0.41	1.37 p. m.	1.48 p. m.	0.01	0.13	0.37	0.40											
Lincoln, Nebr	13–14	10.55 p. m.	1.00 a. m.	0.99	11.32 p. m.	12.32 p. m.	0.01	0.12	0.17	0.26	0.32	0.41	0.48	0.49	0.51	0.54	0.58	0.82			
Little Rock, Ark	20			0.78														0.43			
Los Angeles, Cal	5			0.01														0.01			
Louisville, Ky	1			0.93														0.29			
Lynchburg, Va	8			0.37														†			
Macon, Ga	22	2.37 p. m.	4.25 p. m.	0.98	2.56 p. m.	3.26 p. m.	0.01	0.19	0.46	0.56	0.66	0.81	0.93								
Madison, Wis	14			0.58														0.31			
Marquette, Mich	27			0.53														0.49			
Memphis, Tenn	20			0.20														0.16			
Meridian, Miss	21	2.50 a. m.	6.37 a. m.	0.84	3.40 a. m.	4.00 a. m.	0.19	0.09	0.22	0.35	0.41										
Milwaukee, Wis	9			0.41														0.34			
Minneapolis, Minn	14–15	11.10 p. m.	7.14 a. m.	2.05	12.07 a. m.	1.32 a. m.	0.18	0.08	0.21	0.30	0.36	0.42	0.53	0.66	0.82	0.94	1.09	1.23	1.49		
	16	7.47 p. m.	9.00 p. m.	0.83	8.12 p. m.	8.37 p. m.	0.17	0.32	0.34	0.36	0.47	0.65									
Mobile, Ala	1	7.15 a. m.	12.20 p. m.	0.79	10.16 a. m.	10.25 a. m.	0.07	0.35	0.56												
	20	5.45 a. m.	11.45 a. m.	2.42	6.34 a. m.	7.46 a. m.	0.10	0.15	0.33	0.37	0.42	0.46	0.47	0.50	0.50	0.51	0.58	0.72	1.19		
					10.02 a. m.	10.32 a. m.	1.52	0.17	0.21	0.36	0.53	0.69	0.78								
	21	6.10 a. m.	10.15 a. m.	0.68	7.35 a. m.	7.54 a. m.	0.08	0.12	0.19	0.34	0.48										
Modena, Utah	14			0.04														0.03			
Montgomery, Ala	1	6.25 a. m.	1.00 p. m.	1.63	10.10 a. m.	10.21 a. m.	0.53	0.20	0.38	0.44											
	18	6.42 p. m.	7.20 p. m.	1.27	6.42 p. m.	7.09 p. m.	0.01	0.24	0.50	0.83	1.03	1.22	1.25								
	21	6.50 p. m.	8.25 p. m.	0.53	6.56 p. m.	7.09 p. m.	0.01	0.19	0.36	0.44											
Moorhead, Minn	9			0.49														0.40			
Mount Tamalpais, Cal	18			0.20														0.14			
Mount Weather, Va	31	2.45 p. m.	4.30 p. m.	0.74	3.13 p. m.	3.38 p. m.	0.06	0.05	0.15	0.25	0.42	0.61									
Nantucket, Mass	19			0.42														0.23			
Nashville, Tenn	21	3.36 p. m.	10.00 p. m.	1.21	3.42 p. m.	3.55 p. m.	0.02	0.48	0.59	0.65											
New Haven, Conn	25			0.18														0.16			
New Orleans, La	1	7.25 a. m.	10.45 a. m.	1.44	7.44 a. m.	8.36 a. m.	0.05	0.07	0.17	0.19	0.25	0.28	0.28	0.42	0.79	1.06	1.17	1.23			
New York, N. Y	31			0.54														0.15			
Norfolk, Va	8			0.51														0.17			
North Head, Wash	17			1.00														0.20			
North Platte, Nebr	21			0.62														0.21			
Northfield, Vt	24			0.33														0.22			
Oklahoma, Okla	16	2.40 p. m.	2.55 p. m.	0.35	2.42 p. m.	2.48 p. m.	0.01	0.32	0.34												
	28	2.15 p. m.	5.55 p. m.	0.65	4.08 p. m.	4.26 p. m.	0.01	0.13	0.39	0.48	0.50										
Omaha, Nebr	21	12.40 p. m.	2.40 p. m.	0.38	2.06 p. m.	2.16 p. m.	0.03	0.14	0.30												
Oswego, N. Y	31			0.67														0.42			
Palestine, Tex	11			0.66														0.40			
Parkersburg, W. Va	22	6.52 p. m.	7.35 p. m.	0.43	6.57 p. m.	7.09 p. m.	0.01	0.30	0.36	0.39											
	29	4.20 p. m.	5.30 p. m.	0.45	5.03 p. m.	5.18 p. m.	0.02	0.14	0.25	0.41											
Pensacola, Fla	1	11.20 a. m.	4.30 p. m.	0.71	12.14 p. m.	12.35 p. m.	0.04	0.23	0.32	0.43	0.53	0.56									
	20	8.40 a. m.	9.55 a. m.	0.60	8.44 a. m.	8.59 a. m.	0.01	0.12	0.34	0.45											
Peoria, Ill	28			0.76														0.31			
Philadelphia, Pa	30			0.41														.39			
Phoenix, Ariz	‡																				
Pierre, S. Dak	29–30			0.67														0.26			
Pittsburg, Pa	31			0.28														0.16			
Pocatello, Idaho	15			0.46														0.27			
Point Reyes Light, Cal	16			0.10														0.10			
Port Huron, Mich	31			0.68														0.51			
Portland, Me	24			0.54														0.34			
Portland, Oreg	17			0.73														0.19			
Providence, R. I	19	5.58 a. m.	8.10 a. m.	0.62	7.07 a. m.	7.22 a. m.	0.13	0.06	0.27	0.45											
Pueblo, Colo	28			0.13														0.09			
Raleigh, N. C	26	6.34 p. m.	8.20 p. m.	0.60	6.47 p. m.	7.07 p. m.	0.01	0.12	0.31	0.42	0.51										
	31	9.12 p. m.	10.50 p. m.	0.65	9.18 p. m.	9.34 p. m.	0.02	0.14	0.30	0.39	0.47										
Rapid City, S. Dak	10			0.19														0.11			
Red Bluff, Cal	5			0.90														0.44			
Reno, Nev	31			0.17														0.09			
Richmond, Va	31			0.34														0.28			
Rochester, N. Y	23			0.53														0.42			
Roseburg, Oreg	5			0.54														0.18			
Roswell, N. Mex	14	9.45 a. m.	11.05 a. m.	0.66	10.00 a. m.	10.30 a. m.	T.	0.05	0.11	0.24	0.27	0.50	0.59								
	29	3.00 p. m.	4.50 p. m.	1.30	3.47 p. m.	4.47 p. m.	0.04	0.12	0.38	0.61	0.79	0.87	0.91	0.92	0.92	0.93	0.97	1.26			
Sacramento, Cal	18			0.02														0.02			
St. Louis, Mo	28	3.35 p. m.	5.30 p. m.	0.87	4.21 p. m.	4.31 p. m.	0.32	0.33	0.48												
St. Paul, Minn	14–15	11.20 p. m.	3.45 a. m.	2.26	11.52 p. m.	1.52 a. m.	0.06	0.07	0.17	0.27	0.36	0.44	0.52	0.60	0.74	0.90	1.01	1.18	1.63	1.81	1.95
Salt Lake City, Utah	26			0.55														0.19			
San Antonio, Tex	11–12	11.45 p. m.	4.58 a. m.	0.57	12.23 a. m.	12.38 a. m.	0.01	0.16	0.30	0.39											
San Diego, Cal	5			0.01														0.01			
Sandusky, Ohio	18			0.53														0.45			
San Francisco, Cal	5			0.15														0.09			
San Jose, Cal	5			0.12														0.09			
San Luis Obispo, Cal	5			0.07														0.05			
Santa Fe, N. Mex	31			0.47														†			
Sault Ste. Marie, Mich	19–20	11.20 p. m.	D. N. a. m.	0.70	11.42 p. m.	12.07 a. m.	0.12	0.13	0.32	0.38	0.41	0.48									
Savannah, Ga	19			0.04														0.04			
Scranton, Pa	1	7.20 p. m.	D. N. p. m.	0.80	8.10 p. m.	8.27 p. m.	0.43	0.15	0.15	0.35	0.36										
Seattle, Wash	12			0.44														0.15			
Sheridan, Wyo	15			0.38														0.14			
Shreveport, La	11			0.49														0.21			
Sioux City, Iowa	21	5.15 p. m.	7.25 p. m.	0.86	5.48 p. m.	6.08 p. m.	0.17	0.12	0.31	0.43	0.49										
Southeast Farallon, Cal	4			0.06														0.06			
Spokane, Wash	15–16			0.30														0.07			
Springfield, Ill	20	5.54 p. m.	D. N. p. m.	0.67	9.21 p. m.	9.47 p. m.	0.11	0.07	0.18	0.24	0.35	0.46	0.48								
Springfield, Mo	29			0.13														0.11			
Syracuse, N. Y	1	5.40 p. m.	7.40 p. m.	0.91	5.45 p. m.	6.10 p. m.	0.04	0.31	0.41	0.45	0.55	0.59									
Tacoma, Wash	3			0.71														0.23			
Tampa, Fla	15	3.40 p. m.	5.30 p. m.	0.67	3.43 p. m.	4.09 p. m.	0.01	0.18	0.35	0.47	0.52	0.62	0.65								
Tatoosh Island, Wash	4			1.18														0.17			
Taylor, Tex	11	6.58 p. m.	10.00 p. m.	2.08	7.50 p. m.	8.35 p. m.	0.07	0.11	0.22	0.35	0.59	0.94	1.33	1.60	1.83	1.93					
Thomasville, Ga	18	1.25 p. m.	3.22 p. m.	0.92	1.35 p. m.	1.53 p. m.	0.01	0.25	0.44	0.63	0.71										
	20	2.52 p. m.	5.05 p. m.	0.52	3.41 p. m.	3.56 p. m.	0.04	0.09	0.28	0.41											
Toledo, Ohio	31	9.11 a. m.	11.55 a. m.	0.68	9.20 a. m.	9.35 a. m.	0.01	0.07	0.25	0.36											
Tonopah, Nev	1			T.														T.			
Topeka, Kans	28			0.67														0.32			
Valentine, Nebr	6			0.31														0.30			
Vicksburg, Miss	20			0.29														0.21			

TABLE II.—*Accumulated amounts of precipitation for each five minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any five minutes, or 0.80 inch in one hour, during May, 1911, at all stations furnished with self-registering gauges*—Continued.

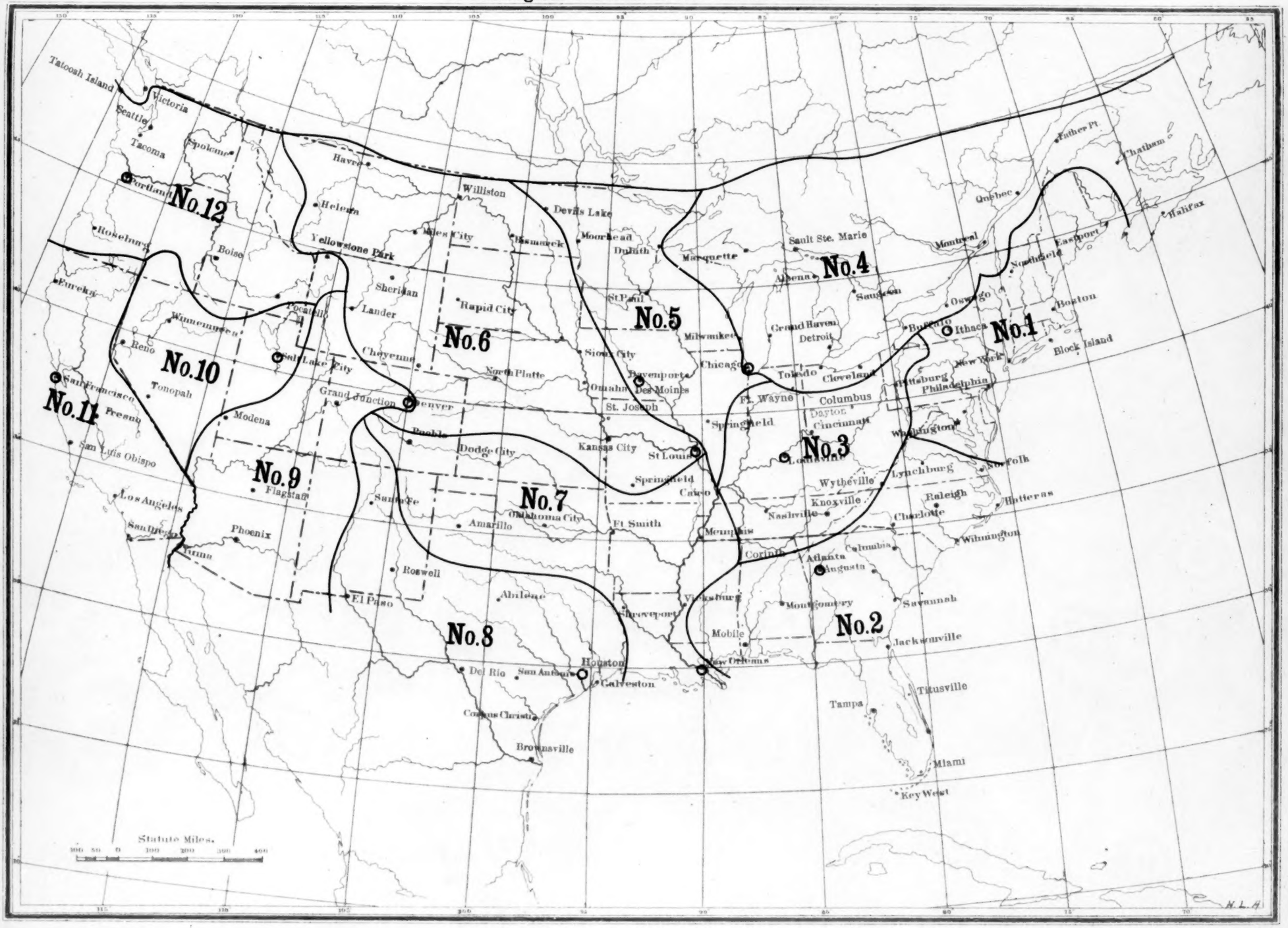
Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.												
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Walla Walla, Wash.	25	5.48 p. m.	8.25 p. m.	0.85	6.02 p. m.	6.34 p. m.	0.05	0.07	0.23	0.36	0.45	0.53	0.57	0.61	.....	.....	.....	.....	.....	.....	.....
Washington, D. C.	31	4.55 p. m.	9.00 p. m.	0.59	5.11 p. m.	5.15 p. m.	0.01	0.31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wichita, Kans.	27	12.00 m.	3.50 p. m.	0.96	2.40 p. m.	3.04 p. m.	0.30	0.20	0.34	0.47	0.58	0.63	.....	.....	.....	.....	.....	.....	.....	.....	.....
	27–28	4.55 p. m.	4.30 a. m.	1.75	12.32 a. m.	1.03 a. m.	0.74	0.13	0.17	0.24	0.37	0.45	0.50	.....	.....	.....	.....	.....	.....	.....	.....
	31	1.30 a. m.	4.00 a. m.	0.96	1.39 a. m.	2.04 a. m.	0.01	0.37	0.74	0.85	0.87	0.92	.....	.....	.....	.....	.....	.....	.....	.....	.....
Williston, N. Dak.	15–16	8.45 p. m.	D. N. a. m.	0.81	1.49 a. m.	2.06 a. m.	0.32	0.14	0.28	0.36	0.39	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Wilmington, N. C.	26	.....	.....	0.14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	.....	.....	.....
Winnemucca, Nev.	14	.....	.....	0.22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.10	.....	.....	.....
Wytheville, Va.	31	4.39 p. m.	6.30 p. m.	0.63	4.45 p. m.	5.00 p. m.	0.05	0.18	0.34	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Yankton, S. Dak.	21	.....	.....	1.03	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.48	.....	.....	.....
Yellowstone Park, Wyo.	23–24	.....	.....	0.48	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....

* Self-register not working. † Record incomplete. ‡ No precipitation occurred during month.

TABLE III.—*Data furnished by the Canadian Meteorological Service, May, 1911.*

Stations.	Pressure.			Temperature.						Precipitation.		
	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max.+mean min. ÷2.	Departure from normal.	Mean maximum.	Mean minimum.	Highest.	Lowest.	Total.	Departure from normal.	Total snowfall.
St. Johns, N. F.	29.75	29.89	—.09	45.0	+2.1	54.5	35.6	70	29	2.87	—0.79	T.
Sydney, C. B. I.	29.96	30.00	+.03	50.0	+4.8	61.0	38.9	75	29	1.08	—2.69	.....
Halifax, N. S.	29.92	30.03	+.05	53.0	+4.6	64.9	41.1	89	30	1.39	—2.87	T.
Grand Manan, N. B.	29.94	29.99	+.02	52.7	+4.8	62.2	43.2	96	31	0.17	—3.44	T.
Yarmouth, N. S.	29.97	30.04	+.06	50.5	+2.9	58.7	42.3	72	28	1.50	—2.30	.....
Charlottetown, P. E. I.	29.94	29.98	+.02	52.3	+5.4	62.8	41.8	80	30	0.40	—2.51	.....
Chatham, N. B.	29.94	29.96	+.01	55.1	+6.6	68.2	42.0	92	27	2.63	—0.58	.....
Father Point, Que.	29.88	29.90	—.03	48.7	+4.7	57.0	40.4	78	32	2.25	—0.33	.....
Quebec, Que.	29.62	29.94	.00	58.0	+8.1	69.6	46.3	91	24	2.06	—1.02	T.
Montreal, Que.	29.76	29.96	+.02	62.7	+8.0	72.1	53.3	89	28	2.39	—0.56	T.
Stonecliffe, Ont.	29.37	29.97	+.04	57.6	+5.3	71.6	43.6	93	20	2.81	+0.80	1.2
Ottawa, Ont.	29.71	30.03	+.09	61.6	+6.7	73.3	50.0	90	25	2.43	—0.16	.....
Kingston, Ont.	29.70	30.01	+.05	57.4	+4.5	67.0	47.8	85	28	3.63	+0.95	T.
Toronto, Ont.	29.63	30.00	+.02	61.2	+8.0	73.5	49.0	91	28	2.01	—1.03	0.2
White River, Ont.	28.64	29.95	.00	51.4	+5.7	64.5	38.2	89	12	3.04	+1.09	T.
Port Stanley, Ont.	29.40	30.04	+.07	58.0	+4.9	68.2	47.9	86	28	1.78	—1.40	0.4
Southampton, Ont.	29.32	.....	.....	56.4	+5.7	66.2	46.6	90	27	4.11	+1.67	0.2
Parry Sound, Ont.	29.32	30.00	+.05	58.0	+6.9	69.7	46.3	89	23	2.27	—0.66	0.5
Port Arthur, Ont.	29.24	29.95	—.01	50.8	+4.9	61.8	39.7	80	21	2.36	+0.21	.....
Winnipeg, Man.	29.07	29.89	—.07	55.1	+3.5	67.8	42.4	86	19	6.38	+4.10	1.6
Minnedosa, Man.	28.08	29.89	—.07	51.2	+2.8	64.3	38.1	86	13	2.87	+1.42	2.0
Qu'Appelle, Sask.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Medicine Hat, Alberta.	27.55	29.82	—.07	54.5	+0.4	67.9	41.2	99	30	1.84	+0.53	.....
Swift Current, Sask.	27.33	29.89	—.03	50.5	—0.2	62.1	38.9	89	25	1.68	—0.08	0.4
Calgary, Alberta.	26.32	29.84	—.04	47.3	—1.7	58.5	36.1	83	26	5.03	+3.26	22.2
Banff, Alberta.	25.30	29.89	+.01	43.1	—3.9	53.9	32.3	74	24	1.35	—0.69	0.5
Edmonton, Alberta.	27.57	29.85	—.03	51.1	+0.3	65.2	36.9	83	24	1.95	+0.40	T.
Prince Albert, Sask.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Battleford, Sask.	28.14	29.86	—.06	50.6	—0.4	62.4	38.7	91	24	2.60	+0.98	.....
Kamloops, B. C.	28.59	29.85	—.04	55.6	—3.5	67.5	43.8	88	35	1.18	—0.06	.....
Victoria, B. C.	29.88	29.98	—.02	52.3	—0.2	60.3	44.4	72	38	1.80	+0.32	.....
Barkerville, B. C.	25.58	29.88	+.04	41.5	—4.0	52.5	30.6	64	22	1.86	—0.66	.....
Dawson, Yukon.	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Hamilton, Bermuda.	29.99	30.15	+.09	69.4	0.0	75.3	63.5	80	58	2.82	—1.84	.....

Climatological Districts of the United States.



106 Climatological Sections in the United States.

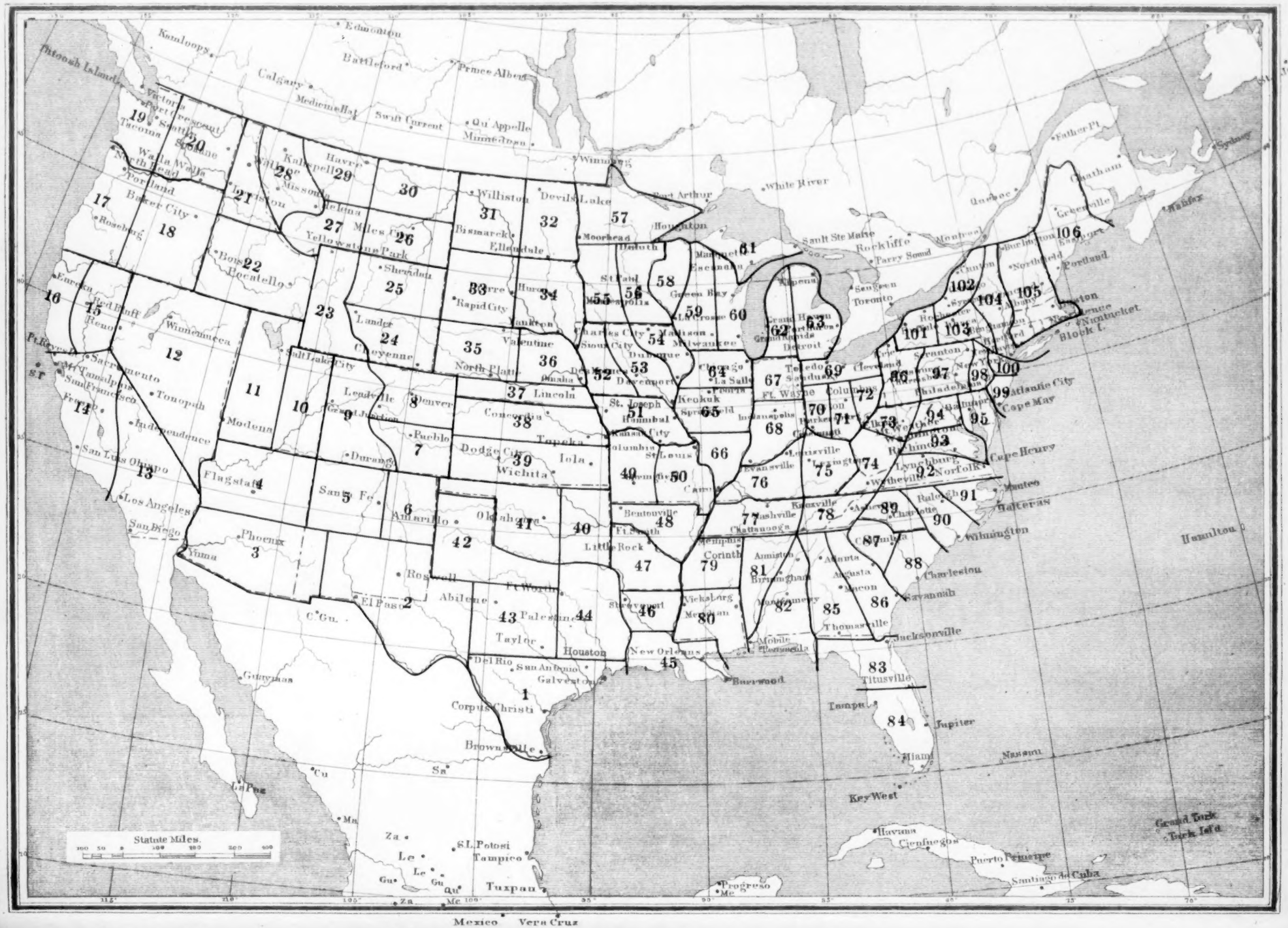

Barkerville
Edmonton
Kamloops
Battleford
Prince Albert
Calgary
Medicine Hat
Swift Current
Qu'Appelle
Minnedosa
Winnipeg
Victoria
Port Townsend
Seattle
Tacoma
Spokane
Walla Walla
North Head
Portland
Kalispell
Havre
Missoula
Helena
Miles City
Yellowstone Park
Williston
Devils Lake
Bismarck
Ellendale
Rapid City
Sheridan
Lander
Cheyenne
Salt Lake City
Boise
Pocatello
Winnemucca
Reno
Eureka
Red Bluff
Sacramento
San Francisco
Tonopah
Independence
San Luis Obispo
Los Angeles
San Diego
Flagstaff
Yuma
Phoenix
Modena
Leadville
Denver
Grand Junction
Pueblo
Durango
Santa Fe
Amarillo
Abilene
Fort Worth
El Paso
Roswell
Dodge City
Wichita
Topeka
Concordia
Lincoln
Omaha
Valentine
Grand Island
Norfolk
Columbus
Kearney
Hastings
Red Cloud
Beatrice
Nebraska City
Council Bluffs
Des Moines
Davenport
Dubuque
Madison
Milwaukee
Green Bay
La Crosse
Charles City
Sioux City
St. Paul
Minneapolis
Duluth
Moorhead
Houghton
Marquette
Escanaba
Port Arthur
White River
Sault Ste Marie
Rockliffe
Parry Sound
Toronto
Saugeen
Kingston
Ottawa
Montreal
Quebec
Father Pt
Chatham
Gaspe
Sydney
Yarmouth
Halifax
Portland
Northfield
Boston
Nantucket
Block I.
Cape May
Atlantic City
Philadelphia
Cape Henry
Norfolk
Hatteras
Wilmington
Charleston
Savannah
Jacksonville
Titusville
Tampa
Jupiter
Miami
Nassau
Key West
Havana
Cienfuegos
Puerto Principe
Santiago de Cuba
Grand Turk
Turk Isl'd
Hamilton
Bermuda
Toluca
Chicago
La Salle
Peoria
Rockford
Grand Haven
Grand Rapids
Detroit
Toledo
Cleveland
Sandusky
Fort Wayne
Columbus
Springfield
Indianapolis
Terre Haute
Evansville
Louisville
Lexington
Cincinnati
Parkersburg
Wheeling
Pittsburg
Erie
Scranton
Newark
New York
Richmond
Lynchburg
Petersburg
Weldon
Raleigh
Greensboro
Charlotte
Asheville
Knoxville
Nashville
Chattanooga
Memphis
Corinth
Little Rock
Fort Smith
Bentonville
Kansas City
St. Joseph
Hannibal
St. Louis
Keokuk
Burlington
Davenport
Rock Island
Galesburg
Peoria
Springfield
Terre Haute
Indianapolis
Columbus
Fort Wayne
Kansas City
Topeka
Concordia
Lincoln
Omaha
Valentine
Rapid City
Sheridan
Miles City
Yellowstone Park
Havre
Kalispell
Missoula
Helena
Williston
Devils Lake
Bismarck
Ellendale
Moorhead
Duluth
St. Paul
Minneapolis
Sioux City
Charles City
Dubuque
Madison
Milwaukee
Green Bay
La Crosse
Marquette
Escanaba
Houghton
Port Arthur
Rockliffe
Parry Sound
Toronto
Saugeen
Kingston
Ottawa
Montreal
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Father Pt
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Gaspe
Sydney
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Titusville
Tampa
Jupiter
Miami
Nassau
Key West
Havana
Cienfuegos
Puerto Principe
Santiago de Cuba
Grand Turk
Turk Isl'd
Hamilton
Bermuda
Toluca
Statute Miles.
Mexico
Vera Cruz
Tuxpan
Tampico
S.L.Potosi
Progreso
Campeche
Merida
Belize
Guatemala
Salvador
Nicaragua
Costa Rica
Panama
Jamaica
Kingston
Port Royal
Cuba
Haiti
Porto Rico
Barbados
Trinidad
Curacao
Venezuela
Colombia
Ecuador
Peru
Bolivia
Chile
Argentina
Paraguay
Uruguay
Brazil
Guyana
Surinam
French Guiana
Dutch Guiana
British Guiana
Caracas
Bogota
Lima
La Paz
Buenos Aires
Montevideo
Asuncion
Rio de Janeiro
Pernambuco
Bahia
Para
Manaos
Iquitos
Quito
Guayaquil
Valparaiso
Santiago
Mendoza
Cordoba
Rosario
Tucuman
Salta
Jujuy
Corrientes
Posadas
Encarnacion
Concepcion
Montevideo
Buenos Aires
Rio Grande
Pelotas
Porto Alegre
Florianopolis
Curitiba
Sao Paulo
Santos
Rio de Janeiro
Victoria
Bahia
Pernambuco
Maceio
Aracaju
Natal
Fortaleza
Parnaiba
Belem
Para
Manaos
Iquitos
Quito
Guayaquil
Lima
La Paz

Chart I. Hydrographs of Several Principal Rivers, May, 1911.

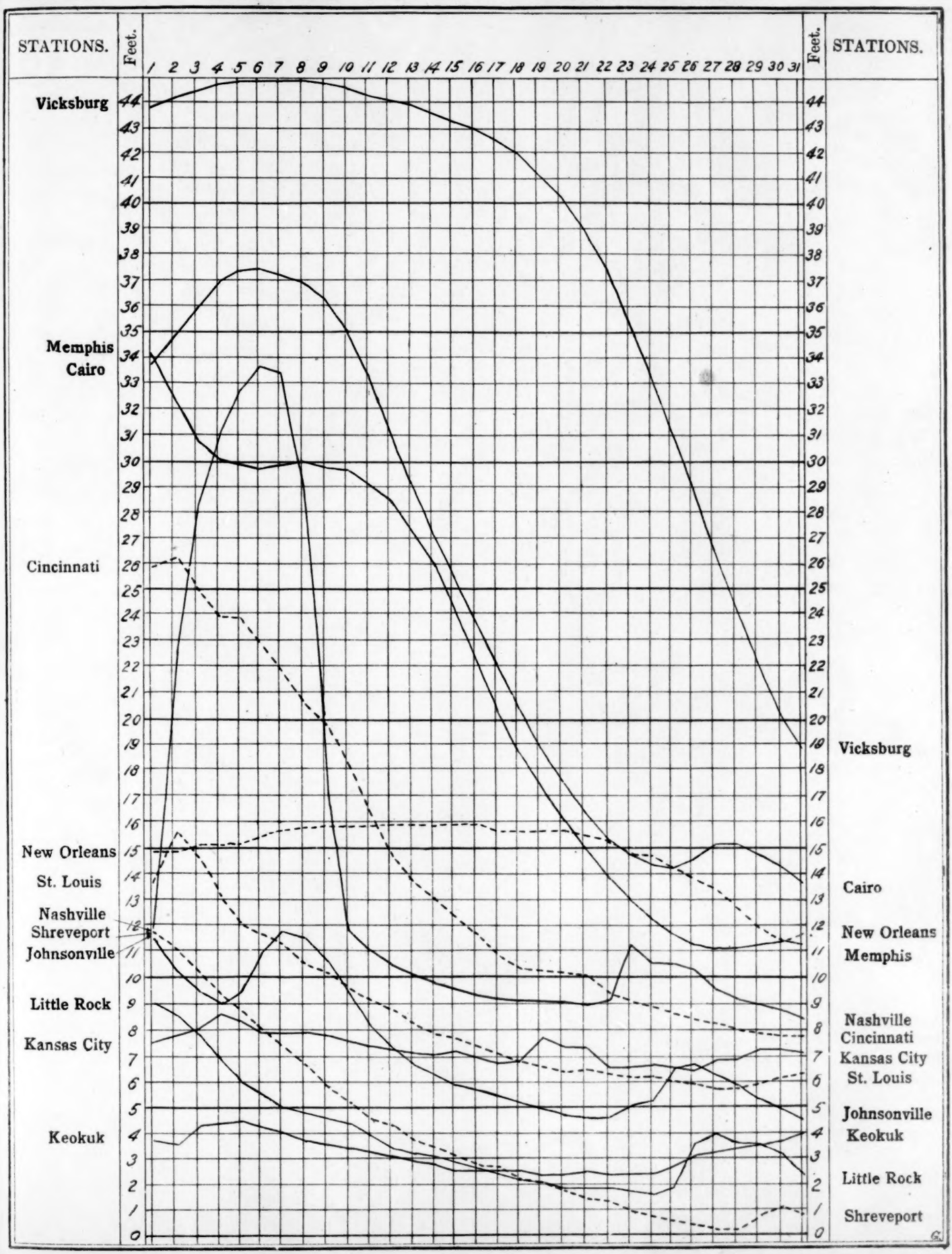


Chart II. Tracks of Centers of High Areas, May, 1911.

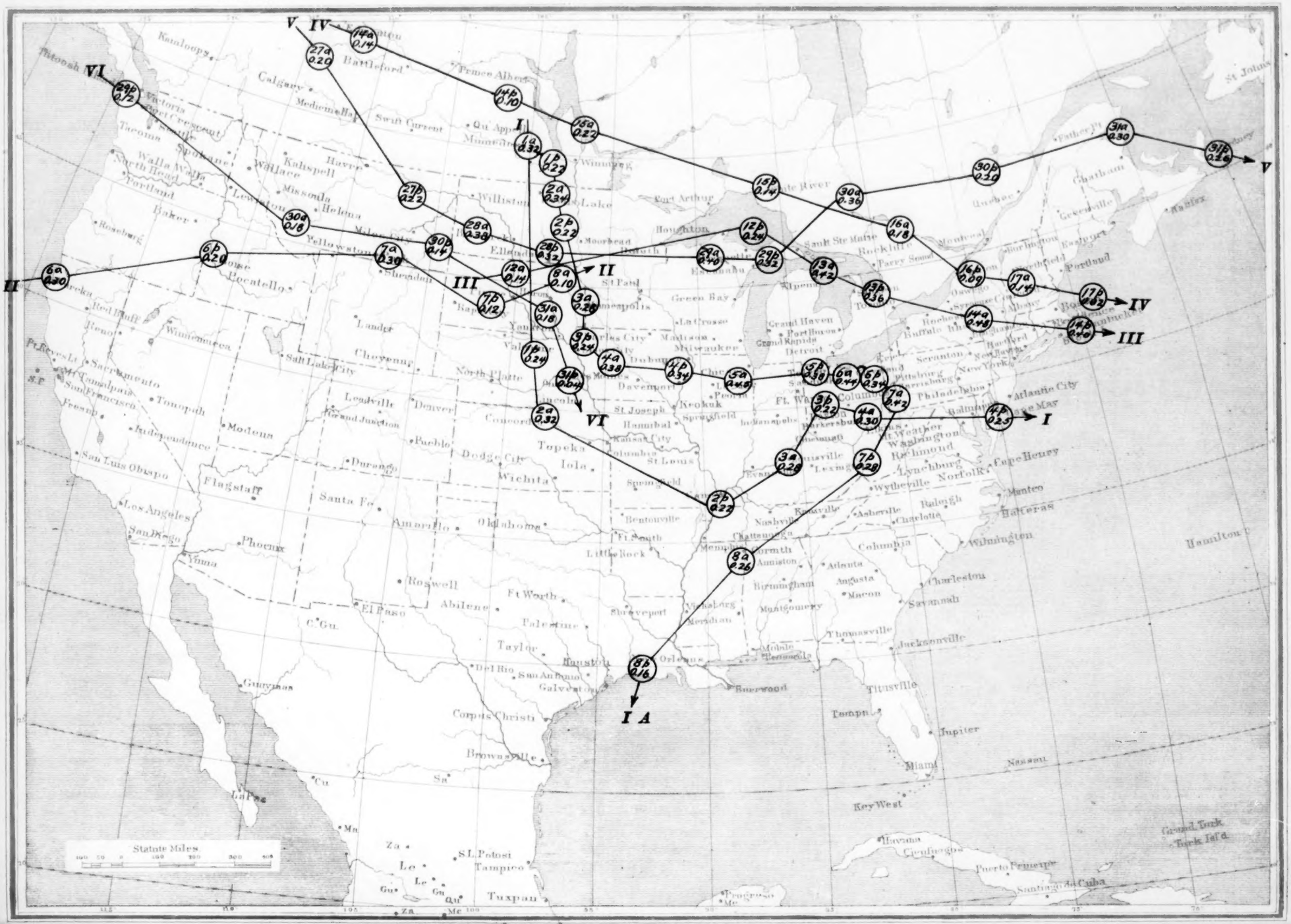


Chart III. Tracks of Centers of Low Areas, May, 1911.

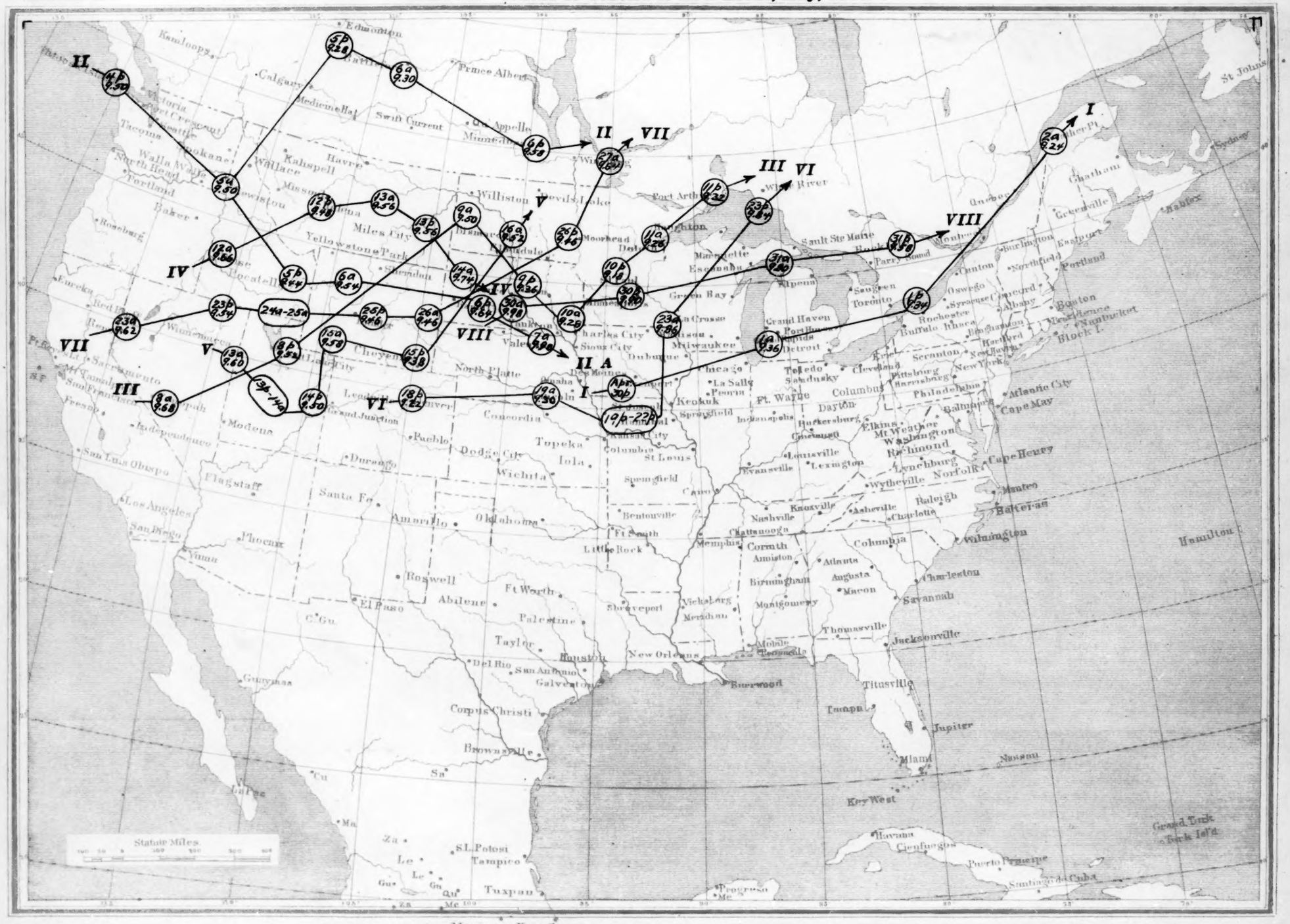


Chart IV. Departure of the Mean Temperature from the Normal, May, 1911.

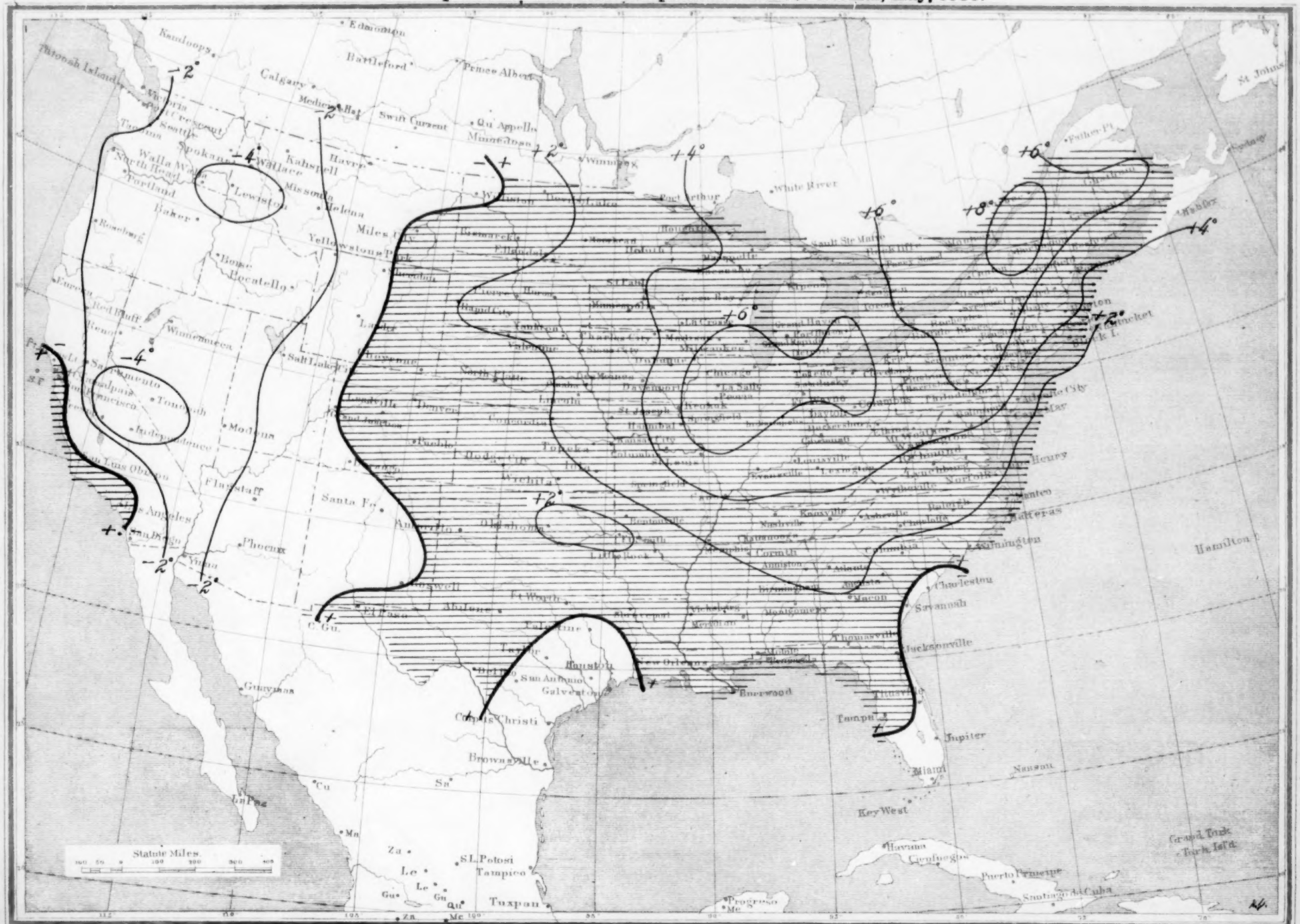


Chart V. Total Precipitation, May, 1911.

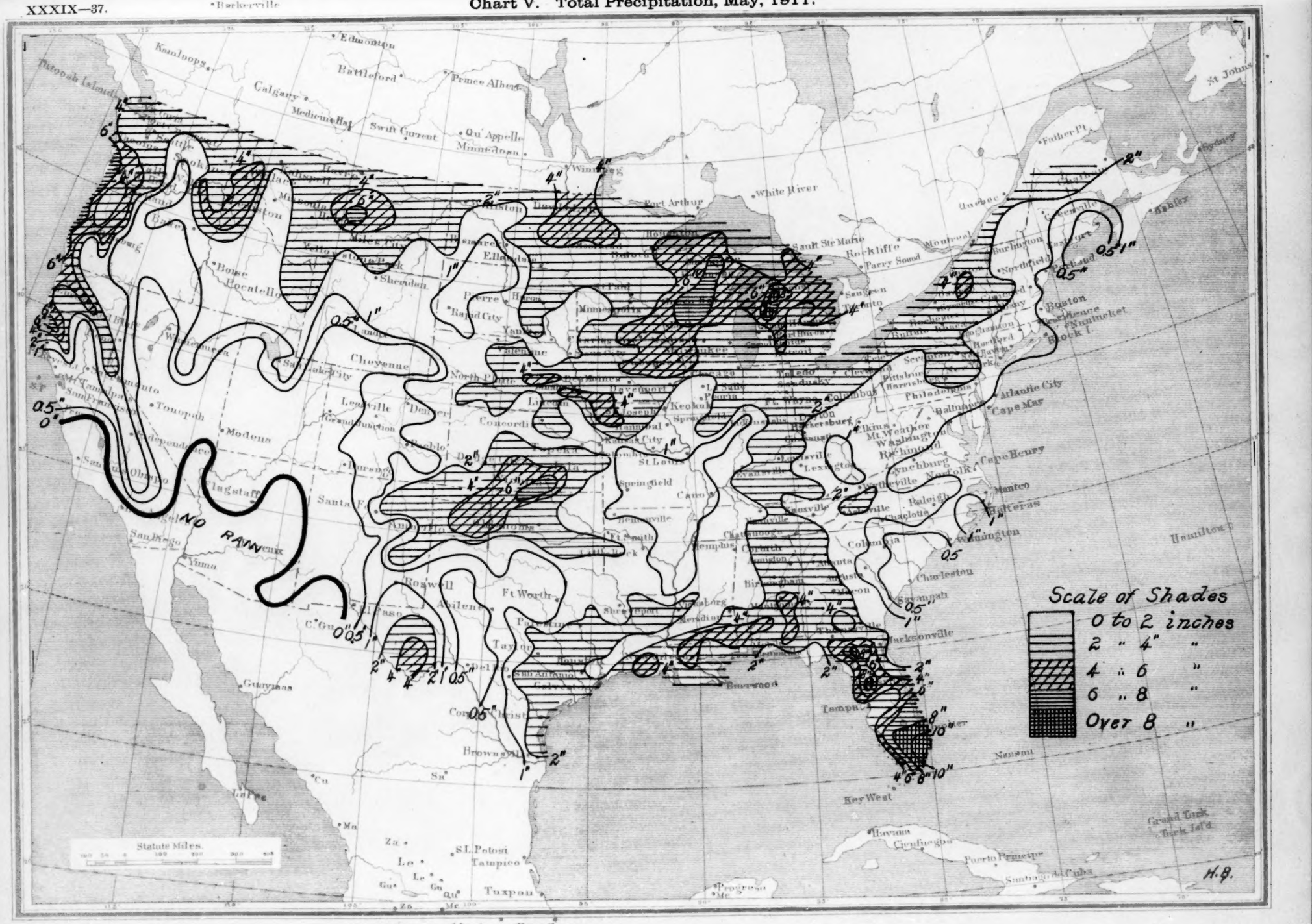


Chart VI. Percentage of Clear Sky between Sunrise and Sunset, May, 1911.

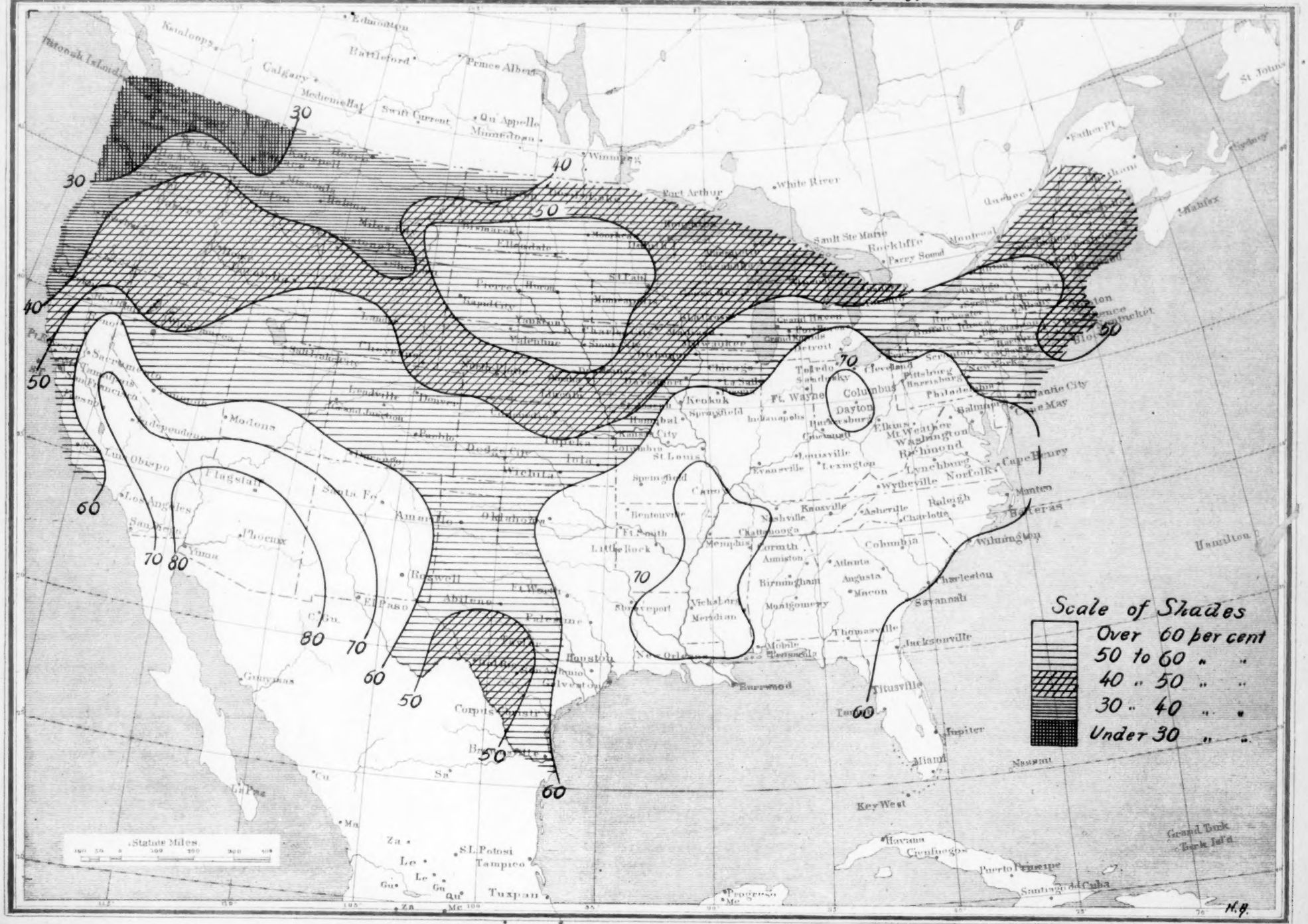


Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, May, 1911.

